

DRAFT

COLISEUM SHORELINE PROJECT

Environmental Impact Report

July 1, 1994

ER-93-49

SCH# 94043015

Prepared for:
City of Oakland
Office of Planning and Building

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City of Oakland, California

California Environmental Quality Act (CEQA)
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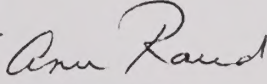
COLISEUM SHORELINE PROJECT

The City of Oakland is hereby releasing this Draft Environmental Impact Report (EIR), finding it to be accurate and complete and ready for public review. Members of the public are invited to respond to the EIR. Comments should focus on the sufficiency of the EIR in discussing possible impacts on the environment, ways in which adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors. Please address all comments to the Oakland City Planning Commission, Attention Anu Raud, Environmental Review Coordinator, Oakland City Planning Department, 421 - 14th Street, 1st Flr, Oakland, CA 94612. Comments should be received no later than Friday, 8/19/94.

- X The City Planning Commission will conduct a public hearing on the Draft EIR on 7/20/94 in the Lakeside Garden Center, Lakeside Park, 666 Bellevue Avenue, at its regular public hearing meeting starting at 6:30 PM.
- X After all comments are received, a Final EIR will be prepared and considered for acceptance by the City Planning Commission on [to be scheduled] in the Lakeside Garden Center, Lakeside Park, 666 Bellevue Avenue, at its regular meeting starting at 1:30 PM.
- X The Draft EIR is attached.
- X The Draft EIR is available at the Office of Planning and Building.

Reference documents related to the Draft Environmental Impact Report are on file at City offices. If you have any questions, please telephone the Office of Planning and Building, Environmental Review Section at 238-3940. The contact person for this document is Stanley Muraoka, Planner II.

ALVIN D. JAMES
Director of City Planning

By: 
ANU RAUD
Environmental Review Coordinator
Form ER-12.ROR (Rev. 5/93)

**COLISEUM SHORELINE PROJECT
ENVIRONMENTAL IMPACT REPORT**

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1.0 INTRODUCTION

As co-sponsors of the Coliseum Shoreline Project, the City of Oakland through its Office of Economic Development and Employment, and Price-Costco, propose to develop a 22.6 acre parcel of vacant, undeveloped land directly west of Oakport Street and Interstate 880 (I-880), between Hassler Way and 66th Avenue. Initially, the southerly 13.5 acres of the site would be developed with a 135,000 square foot Price-Costco warehouse store and associated parking. The northerly 9.1 acres of the site would be developed thereafter with up to 115,000 square feet of value-oriented retail uses, parking, and dedicated open space alongside Damon Slough that would include a public access trail. In addition to the site improvements described, the project sponsors propose the development of uniform design guidelines; landscaping, lighting, loading, and on-site circulation improvements; improved bike routes/lanes; and improvements of Oakport Street. All construction would be completed and operation of all phases of the project would begin in 1995.

The City of Oakland is the Lead Agency for this project. The City's Office of Planning and Building issued an Initial Study for the proposed project on March 24, 1994. The Initial Study identified various potentially significant environmental effects of the project including geotechnical issues, air and water quality, visual quality, land use, socioeconomic factors, hazardous materials, traffic, transportation and circulation, and public services and utilities. The Initial Study determined that the project would have the potential to result in significant environmental effects, and consequently, that the preparation of an EIR would be required. A copy of the Initial Study is presented in Appendix A. Effects found not to be significant in the Initial Study, and thus omitted from analysis in the EIR, are identified in Section 6.6.

1.1 PURPOSES OF THE EIR

The purpose of the EIR, as identified in the California Environmental Quality Act ("CEQA") *Guidelines* Section 15121, is to identify all potentially significant impacts of a project on the physical environment including both direct and indirect effects, to determine the extent to which those effects could be avoided or reduced, and to identify and evaluate feasible alternatives to the project. An EIR is an informational document that in itself does not determine whether a project will be approved.

When an EIR concludes that a project could result in significant direct or indirect effects, those agencies with approval authority over the project are required to make one or more of the following determinations before the project can be approved (CEQA *Guidelines* Section 15091):

- "Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen" the significant impacts identified in the EIR;
- Such alterations are within the responsibility and jurisdiction of another agency (which has adopted or should adopt the changes);
- Specific social, economic, or other concerns render the mitigation measures for, or alternatives to, the project infeasible.

According to the CEQA *Guidelines* Section 15151, the EIR need not be exhaustive in its analysis of a project, but should analyze important issues to a sufficient degree that permitting and approving agencies can make informed decisions. CEQA *Guidelines* Section 15278 requires that the EIR consider "the whole of an action," including both impacts that would directly result and those that would ultimately result; and CEQA *Guidelines* Section 15388 requires analysis of indirect or secondary impacts as well as of direct project effects.

1.2 INTENDED USES OF THE EIR

This EIR is intended to be used as an informational document by interested members of the public; City decision-makers; and other interested and responsible public agencies, as well as the project developers and tenants. The EIR is also intended to apply to all required project approvals, as well as to any other approvals necessary or desirable to implement the project. Approvals, actions, and/or permits would be needed from the City of Oakland, including, but not necessarily limited to, a Major Conditional Use Permit, a Parcel Map, a Disposition and Development Agreement, and grading and building permits. Other permits may be required by the U. S. Army Corps of Engineers, the Bay Conservation and Development Commission, the Regional Water Quality Control Board, and the California Department of Fish and Game. For more information regarding the project approval process, see Section 3.6.

1.3 PUBLIC REVIEW OF THE EIR

The Draft EIR will be available for public review for 45 days. During this period, comments on the accuracy and completeness of the EIR may be submitted by public agencies, other groups, and concerned individuals. Written comments should be submitted to Mr. Stanley Muraoka,

Office of Planning and Building, City of Oakland, 421 14th Street, Room 100, Oakland, California, 94612. Oral comments may be made at a public hearing on the project, to be scheduled and publicly noticed by the City. All oral and written comments relevant to the content of the Draft EIR received during the public comment period will be addressed in the Final EIR.

2.0 SUMMARY

2.1 PROJECT DESCRIPTION

The proposed project site comprises 22.6 acres in the southwestern portion of the City of Oakland in Alameda County. Currently the site is a single, vacant and undeveloped parcel of land directly west of Oakport Street and Interstate 880, between Hassler Way and Damon Slough. Land uses in the vicinity consist primarily of manufacturing, wholesaling, office and public uses.

The proposed Coliseum Shoreline Project would consist of a value-oriented, general merchandise, retail shopping complex comprising a maximum of approximately 250,000 total gross square feet (gsf) of floor space, 1,296 parking spaces (5.2 spaces per 1,000 gsf), associated landscaping, lighting, loading and on-site circulation improvements, and dedicated open space alongside Damon Slough. Value-oriented retail uses would include a major "warehouse"¹ commercial anchor tenant, Price-Costco, occupying a store of about 135,000 gsf and two smaller "category"² tenants, occupying stores of approximately 45,000 to 55,000 gsf each. Approximately 15,000 additional gsf of value-oriented "general"³ retail uses would be provided in two additional smaller buildings of approximately 10,000 and 5,000 gsf each. Price-Costco would occupy a portion of the southeastern end of the site and the other tenants (undetermined at this time) would occupy portions of the northwestern end of the site. Public access to the project would be from Oakport Street via both Hassler Way and 66th Street. Access to other East Bay communities via I-880 is available from Oakport Street.

Price-Costco has publicly announced its intent to close its existing 110,000-square-foot Costco store in San Leandro. The EIR, therefore, considers closure of the San Leandro Costco as a reasonably foreseeable indirect effect of the proposed project and accordingly analyzes the impacts of terminating operations in San Leandro site on traffic, noise, air quality, and population, housing, and employment at the proposed project site.

Details of the project cost and schedule are not available at this writing. For the purpose of this EIR, the project is assumed to be completed and operational in 1995.

2.2 SUMMARY OF IMPACTS

Table 2.1 includes a summary of the impacts of the project, mitigation measures, and levels of impact significance after mitigation. In the table, the environmental impacts of the proposed project are identified and classified as "SIGNIFICANT," "Less than Significant," or "Beneficial." According to California Environmental Quality Act ("CEQA") *Guidelines* Section 15382, a significant impact is ". . . a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project . . .". For each category of physical condition evaluated in this EIR, criteria for significance have been developed using the CEQA *Guidelines*, City of Oakland standards and policies, or the "significance thresholds" of federal, state, regional or local agencies and regulations. Impacts classified as "SIGNIFICANT" meet one or more of the criteria for significance developed for each category of physical condition presented in Section 4.0. Capitalized letters are used for emphasis. Impacts that are adverse but not significant (because they do not meet or exceed the significance thresholds) are labeled "Less than Significant." Impacts that have a beneficial effect on the environment are labeled "Beneficial."

CEQA *Guidelines* Section 15126(c) states that an EIR ". . . shall identify mitigation measures for each significant environmental effect . . .". Mitigation measures are not required for environmental impacts that are adverse but not significant. In this EIR, mitigation measures are identified (where feasible) for all of the impacts labeled "SIGNIFICANT," and for some of the impacts labeled "Less than Significant."

Each impact identified is numbered; mitigation measures identified for that impact are assigned the same number. As required by the CEQA *Guidelines*, each mitigation measure is classified as "Proposed as Part of the Project" or as "Identified in the EIR."

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<u>4.1 LAND USE AND POLICY ANALYSIS</u>		
Impact 4.1-1: The proposed project would include dedicated open space within the BCDC 100-foot shoreline zone, thereby providing public access within the shoreline area. Provision of public access would facilitate and enhance public enjoyment of shoreline recreation and scenic resources and is consistent with the goals and policies of the Bay Conservation and Development Commission. (Beneficial)	Mitigation Measure 4.1-1: Although no mitigation is required, the project sponsors shall submit site plans to BCDC for review as part of the shoreline alteration permitting process. (Identified in the EIR)	Not Applicable
<u>4.2 POPULATION, EMPLOYMENT AND HOUSING</u>		
Impact 4.2-1: The project as proposed would result in the creation of approximately 64 person-years of employment. Adverse environmental impacts that would result from project construction employment are discussed in other sections of the EIR (e. g., Section 4.4, Transportation; Section 4.7, Air Quality; and Section 4.9, Noise). However, the City of Oakland has determined that project construction employment in itself would be a beneficial effect, given existing unemployment and projected declines in jobs in the City through 1995. (Beneficial)	Mitigation Measure 4.2-1: None Required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.2-2: The project as proposed would result in the creation of 228 primary jobs and 274 secondary jobs. Adverse environmental impacts that would result from the project employment are discussed in other sections of the EIR (e.g. Section 4.4, Transportation; Section 4.7, Air Quality; and Section 4.9, Noise). However, the City of Oakland has determined that growth in primary and secondary employment resulting from the project in itself would be a beneficial effect, given current unemployment and declines in jobs in the City through 1995. (Beneficial)	Mitigation Measure 4.2-2: None Required.	Not Applicable
4.3 VISUAL QUALITY		
Impact 4.3-1: Development of the proposed project would partially obstruct scenic views from vantage points in the immediate vicinity of the project site, as well as from the site itself. (Less than Significant)	Mitigation Measure 4.3-1: None required.	Not Applicable
Impact 4.3-2: The development of the proposed project would introduce new sources of light and glare onto the project site. (Less than Significant)	Mitigation Measure 4.3-2: Although this is not a significant impact, the effects of light and glare shall be minimized by the project sponsors through design and landscaping techniques. (Proposed as part of the Project and Identified in the EIR)	Less than Significant
Impact 4.3-3: Development of the proposed project could impair the visual character of the existing site and its vicinity. (Less than Significant)	Mitigation Measure 4.3-3: Although this is not a significant impact, the project sponsors shall incorporate measures into the design of the project to avoid or reduce visual impairment of public views. (Proposed as part of the Project and Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.3-4 (Cumulative): The proposed project, in conjunction with existing and future development, would contribute to a cumulative loss of visual open space in the San Leandro Bay shoreline area. (Less than Significant)	Mitigation Measure 4.3-4: None required.	Not Applicable
<u>4.4 TRAFFIC, TRANSPORTATION, CIRCULATION AND PARKING</u>		
Intersection 1: Oakport Street at Hassler Way		
Impact 4.4-1: Under Existing plus Project Traffic Conditions without Coliseum Events, this intersection would be at LOS E on the eastbound left-turn, although, the intersection's operation would only marginally meet signal warrants. (SIGNIFICANT) No additional impact would result from Coliseum Event traffic. (Less than Significant)	Mitigation Measure 4.4-1: The recommended mitigation under all scenarios is the same since Coliseum event traffic would not impact this intersection. The intersection shall be signalized. With signalization, the intersection would improve to LOS B during both peak hours. LOS B indicates short traffic delays. (Identified in the EIR)	Less than Significant
Intersection 2: I-880 Southbound on-ramp at Oakport Street		
Impact 4.4-2: Under Existing plus Project Traffic Conditions without Coliseum event traffic, this unsignalized intersection would operate at LOS A for both peak hours. This is acceptable and therefore is a less-than-significant impact. Operations at this intersection would not worsen under the other study scenarios since traffic generated by the Coliseum complex would no longer impact this intersection. (Less than Significant)	Mitigation Measure 4.4-2: None Required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Intersection 3: Oakport Street at 66th Avenue Impact 4.4-3: Under Existing plus Project Traffic Conditions without Coliseum event traffic, operating conditions at this unsignalized intersection would degrade from existing conditions, including a deterioration to LOS F conditions on the northbound Oakport Street approach during the weekend noon peak hour, and a worsening of LOS F conditions on that approach during the weekday PM peak hour. (SIGNIFICANT) No additional impact would result from Coliseum Event traffic. (Less than Significant)	Mitigation Measure 4.4-3: The intersection shall be signalized, and the westbound lanes shall be re-stripped to two left-turns with a shared right-turn. Correspondingly, the south leg at this intersection shall be widened to two southbound departure lanes to receive the two lanes of traffic travelling westbound to southbound on Oakport Street. With this mitigation, the intersection would operate at LOS B during both peak hours under Existing plus Project Traffic Conditions without Coliseum Events. With current or cumulative Coliseum Events, the intersection would operate at LOS B during the weekday PM peak hour and LOS C during the weekend noon peak hour. LOS B represents short traffic delays and LOS C represents average traffic delays. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Intersection 4: I-880 Southbound off-ramp at 66th Avenue Impact 4.4-4: The eastbound approach to the intersection would operate at LOS F under existing conditions and would meet signal warrants. Under Existing plus Project Traffic Conditions without Coliseum Events, intersection operation would degrade further and the entire intersection would operate at LOS F. Under Existing plus Project Traffic Conditions with Coliseum Events and under Existing plus Project Conditions with Cumulative Coliseum Events, the intersection would operate at LOS F during the weekend noon peak, even if signalized. Although under all scenarios the intersection or one of its approaches would function at LOS F without project traffic, <u>project traffic would further impair already unacceptable levels of service.</u> Under Existing plus Project Traffic Conditions with Coliseum Events, the project contribution would increase the V/C ratio to greater than 1.2. (SIGNIFICANT)	Mitigation Measure 4.4-4: The intersection shall be signalized. Signalization is needed to improve existing operations on the eastbound approach to the intersection, currently at LOS F. Signalization would improve existing operations, as well as operations with project traffic, to acceptable levels. Under Existing plus Project Traffic Conditions with Coliseum Events, however, the intersection would operate at LOS E under weekend noon scenarios that assume project traffic and Coliseum Events. There is feasible mitigation to improve the LOS though not to acceptable levels (LOS D). (Identified in the EIR)	Under Existing plus Project Traffic Conditions without Coliseum Events: Less than Significant. Under Existing plus Project Traffic Conditions with Coliseum Events, and Existing plus Project with Cumulative Coliseum Events: SIGNIFICANT

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Intersection 5: I-880 Northbound ramps at 66th Avenue		
Impact 4.4-5: The addition of project traffic to Existing Traffic Conditions without Coliseum Events would degrade intersection operations from LOS E to LOS F. Signalization needed under existing traffic conditions would be sufficient to mitigate operations with the project. However, even with signalization, intersection operations would degrade to LOS F with a Volume-to-Capacity (V/C) ratio greater than 1.2, during the weekend noon peak for the scenarios with the Project and Coliseum events. (SIGNIFICANT)	Mitigation Measure 4.4-5: The intersection shall be signalized. Signalization would improve intersection operation under all scenarios, including Existing Traffic Conditions without Coliseum Events. During weekend noon Coliseum Events, long signal cycles would provide some improvement, although the intersection would continue to operate at LOS F. Further improvement could be obtained by not permitting the northbound to eastbound right-turn movement during sports events. Since ramp operation would be at LOS A, one solution could be for Coliseum-bound traffic from the south to be allowed direct entry to the Coliseum before reaching this intersection. (Identified in the EIR)	Under Existing plus Project Traffic Conditions without Coliseum Events: Less-than-Significant. Under Existing plus Project Traffic Conditions with Coliseum Event Traffic, and with Cumulative Coliseum Event Traffic: SIGNIFICANT
I-880 Southbound on-ramp		
Impact 4.4-6: This ramp would operate at LOS A during the weekday p.m. peak hour and LOS B during the weekend noon peak hour with project traffic under all scenarios. (Less than Significant)	Mitigation Measure 4.4-6: None Required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
I-880 Southbound off-ramp		
Impact 4.4-7: Under Existing plus Project Traffic Conditions without Coliseum Events, the ramp would operate at LOS A during both peak hours. However, under Existing plus Project Traffic Conditions with Coliseum Events, and under Existing plus Project Traffic Conditions with Cumulative Coliseum Events, the ramp would function at LOS F during the weekend noon peak hour. (SIGNIFICANT) .	Mitigation Measure 4.4-7: Under Existing plus Project Traffic Conditions without Coliseum Events: None Required. Under Existing plus Project Traffic Conditions with Coliseum Events: This ramp is already two lanes wide and no additional mitigation is feasible.	Under Existing plus Project Traffic Conditions without Coliseum Events: Less than Significant. Under Existing plus Project Traffic Conditions with Coliseum Events, and with Cumulative Coliseum Events: SIGNIFICANT
I-880 Eastbound to Northbound loop on-ramp		
Impact 4.4-8: This ramp would operate at LOS B or borderline LOS A/B with project traffic under all future scenarios. (Less than Significant)	Mitigation Measure 4.4-8: None Required.	Not Applicable
I-880 Northbound off-ramp		
Impact 4.4-9: This ramp would operate at LOS A with project traffic under all future scenarios. (Less than Significant)	Mitigation Measure 4.4-9: None required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
I-880 Northbound Freeway Weave		
Impact 4.4-10: Under Existing plus Project Traffic Conditions without Coliseum Events, during both peak hours, the weaving vehicles would be under LOS D conditions and the non-weaving vehicles would be at LOS C. Weaving operations would be unconstrained. However, under Existing plus Project Traffic Conditions with Coliseum Event Traffic during the weekend noon peak, the weaving vehicle movements would be at LOS D and would be constrained. With the addition of Cumulative Coliseum Event Traffic, operations would also become constrained for weaving vehicles during the weekday PM peak. Under Year 2010 conditions, weaving vehicle operations during the weekday PM peak would worsen further to LOS E. (Cumulative: SIGNIFICANT)	Mitigation Measure 4.4-10: No feasible mitigation for project traffic under future scenarios with Coliseum Events has been identified. (Identified in the EIR).	Under Existing plus Project Traffic Conditions without Coliseum Events: Less than Significant Under Existing plus Project Traffic Conditions with Coliseum Events, and with Cumulative Coliseum Events: SIGNIFICANT
Impact 4.4-11: Under all future scenarios, with project traffic, Oakport Street would operate at acceptable levels of service; however, at times, southbound traffic on Oakport could have difficulty accessing the I-880 Southbound on-ramp, between 66th Avenue and the bridge, because of queues of northbound traffic. (SIGNIFICANT)	Mitigation Measure 4.4-11: Appropriate striping and signage shall be installed at the Oakport Street intersection at the I-880 Southbound on-ramp to keep access to the on-ramp clear at all times. (Identified in the EIR.)	Less than Significant
Impact 4.4-12: The proposed project would slightly increase off-peak transit ridership but would not require provision of additional transit service. (Less than Significant)	Mitigation Measure 4.4-12: None required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.4-13: Traffic volumes on Oakport Street plus the turning movements in and out of the project site could create safety concerns for pedestrians and bicycles; however, the project would include sidewalks along the project frontage and improved bicycling facilities on Oakport. (Less than Significant.)	Mitigation Measure 4.4-13: None required.	Not Applicable
Impact 4.4-14: The proposed project would generate several concerns related to on-site circulation, and accessibility of the driveways, including the following: on-site queue lengths for exiting vehicles could impair on-site circulation; turn radii for trucks accessing the loading docks behind Buildings A, B, and C, as shown on the Site Plan, need to be improved; and turning movements at the unsignalized project driveways could degrade internal circulation and affect operations on Oakport Street. (SIGNIFICANT)	Mitigation Measure 4.4-14: Aisle access shall be redesigned or closed off where appropriate in order to minimize conflicts with queues along the project driveways. Internal intersections with the project driveways shall be all-way STOP-sign controlled in order to facilitate the movement of circulating (non-queuing) vehicles. One or two parking spaces should be removed at both rear corners of Buildings A and B to provide wider turn radii for trucks accessing the loading docks at the rear of Buildings A, B, and C. The northernmost project driveway shall allow right turns in and out only, in order to minimize conflicts with through traffic on Oakport Street. In addition, 280-foot long deceleration lanes shall be provided on Oakport for all three project driveways on Oakport. (Identified in the EIR.)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.4-15: Peak project parking demand is estimated to be 1,361 spaces. Since the project proposes to provide 1,296 spaces, there would be a potential shortage of 65 spaces. (SIGNIFICANT)	Mitigation Measure 4.4-15: The project sponsors shall provide 65 additional parking spaces for the project. The 65 additional parking spaces can be provided through application of one or more (in combination) of the following measures: restripe the parking lot, perhaps with some compact spaces; revise the parking layout to provide additional spaces on-site; secure parking for employees off-site, perhaps through agreements with neighboring property owners for shared parking; and provide incentives for employees to use public transit or car- and vanpools, while prohibiting employee parking of single-occupancy vehicles on the site. (Identified in the EIR.)	Less than Significant
Impact 4.4-16: Development of the project site would result in the loss of the site to spillover parking for Coliseum events. (Less than Significant)	Mitigation Measure 4.4-16: None required.	Not Applicable
Impact 4.4-17: Potential project construction impacts include truck and employee automobile traffic effects on peak commute travel. (SIGNIFICANT)	Mitigation Measure 4.4-17: Construction shall be staged so as to avoid conflict with Coliseum-generated traffic surges. Also, the contractor(s) shall ensure that there is adequate space on-site at all times to accommodate construction employee parking, thereby precluding off-street parking impacts on Coliseum-generated traffic. (Identified in the EIR.)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
4.5 GEOLOGY AND SEISMICITY		
Impact 4.5-1: Construction of buildings, parking areas, and access roadways would create the potential for structural damage over the life of the project resulting from settlement or collapse of weak geologic units and foundation soils. (SIGNIFICANT)	Mitigation Measure 4.5-1: The project sponsors shall implement all feasible engineering methods to reduce the potential for damage due to soil settlement. A design level, site-specific, geotechnical study shall be conducted and specific, recommended technical measures shall be included in the final foundation design. The measures could include re-excavation and compaction of existing on-site soils, removal of weak soils and fill and replacement with imported engineered fill; surcharging and densification; and pile-supported and/or spread-footing foundations. (Identified in the EIR)	Less than Significant
Impact 4.5-2 Construction of the retail complex, including buildings, parking areas, and access roadways, would cause disruption and displacement of soil and the import of fill materials, and would increase the potential for water and wind erosion of graded soil and imported fill during the construction phase activities. (Less than Significant)	Mitigation Measure 4.5-2: None Required.	Not Applicable
Impact 4.5-3: Construction of approximately 250,000 total gross square feet of retail space, parking areas and access roadways would increase the potential danger to employees and customers and risk of damage to structures resulting from the direct and secondary effects of seismic groundshaking. (SIGNIFICANT)	Mitigation Measure 4.5-3: To address potential seismic hazards including groundshaking, the project shall conform to the policies of the Safety & Seismic Safety Element of the Oakland Comprehensive Plan, and shall implement all standard conditions of approval regarding geotechnical issues. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<u>4.5 GEOLOGY AND SEISMICITY</u>		
Impact 4.5-1: Construction of buildings, parking areas, and access roadways would create the potential for structural damage over the life of the project resulting from settlement or collapse of weak geologic units and foundation soils. (SIGNIFICANT)	Mitigation Measure 4.5-1: The project sponsors shall implement all feasible engineering methods to reduce the potential for damage due to soil settlement. A design level, site-specific, geotechnical study shall be conducted and specific, recommended technical measures shall be included in the final foundation design. The measures could include re-excavation and compaction of existing on-site soils, removal of weak soils and fill and replacement with imported engineered fill; surcharging and densification; and pile-supported and/or spread-footing foundations. (Identified in the EIR)	Less than Significant
Impact 4.5-2 Construction of the retail complex, including buildings, parking areas, and access roadways, would cause disruption and displacement of soil and the import of fill materials, and would increase the potential for water and wind erosion of graded soil and imported fill during the construction phase activities. (Less than Significant)	Mitigation Measure 4.5-2: None Required.	Not Applicable
Impact 4.5-3: Construction of approximately 250,000 total gross square feet of retail space, parking areas and access roadways would increase the potential danger to employees and customers and risk of damage to structures resulting from the direct and secondary effects of seismic groundshaking. (SIGNIFICANT)	Mitigation Measure 4.5-3: To address potential seismic hazards including groundshaking, the project shall conform to the policies of the Safety & Seismic Safety Element of the Oakland Comprehensive Plan, and shall implement all standard conditions of approval regarding geotechnical issues. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<u>4.6 HAZARDOUS MATERIALS</u>		
Impact 4.6-1: During construction of the proposed project, there is the potential to encounter hazardous wastes in the soil and there is the associated potential for exposure of workers and the community to hazardous substances because there are hazardous wastes known to be present at the project site. (SIGNIFICANT)	Mitigation Measure 4.6-1: A remediation plan shall be developed for the project site. The Alameda County Health Care Services Agency, Department of Environmental Health, shall be advised of (1) the nature and extent of hazardous wastes known to be present at the site, and (2) the method by which such hazardous wastes will be removed, transported, and disposed of. If the County requests, or if otherwise required by law, the remediation plan shall be submitted to the County for review and approval, prior to implementation of the site remediation. The County may direct whether other State regulatory agencies should become involved. The remediation plan shall be implemented and adequate removal of soil shall be documented in a report to the agencies after any legally required regulatory approvals have been obtained. (Identified in the EIR.)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.6-2: During construction of the proposed project, there is the potential to encounter previously unidentified hazardous substances at the project site. (Less than Significant)	Mitigation Measure 4.6-2: In the event that previously unidentified hazardous substances are encountered during construction, contractors shall be alerted for visible evidence of hazardous materials, such as soil discoloration, suspicious odors, or presence of underground tanks, piping or other buried building materials. The contractor shall have a contingency plan for sampling and analysis of potentially hazardous substances and coordination with the regulatory agencies. If hazardous substances are identified, the contractor shall be required to prepare site health and safety plans, sampling and investigation plans, and if required by law, disposal/remediation plans. Any site investigations or remediations shall be performed in accordance with applicable laws and regulations. Typically, Alameda County Environmental Health Care Services Agency, Department of Environmental Health, would be the responsible agency for any releases of hazardous substances from underground storage tanks; the San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is contaminated and the California Department of Toxic Substances Control could become involved if soils were contaminated. (Identified in the EIR).	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.6-3: If left in place, the existing groundwater monitoring wells at the site could provide a potential conduit for contamination of the groundwater. (SIGNIFICANT).	Mitigation Measure 4.6-3: The wells shall be sampled to demonstrate whether groundwater quality has been affected by previous land uses or off-site sources. If groundwater at the site has not been affected, the project sponsors shall seek regulatory agency approval to abandon the wells in accordance with the procedures contained in Alameda County Ordinance No. 73-68 regulating the construction, repair, reconstruction, destruction or abandonment of wells within Alameda County. If groundwater quality at the site has been affected, notification of the regulatory agencies will be required and it may be necessary to leave the wells in place. In this case, care would be required to ensure that the wells do not become damaged during construction, and that construction of the project does not impede access to the wells. Regular inspections of the wells would also be required to observe any signs of deterioration. (Identified in the EIR).	Less than Significant
Impact 4.6-4: The proposed project includes construction of a retail outlet that may involve the use, storage or transportation of hazardous substances. Activities at the site would include tire installation and a hydraulic lift may be installed as part of the proposed project. Any hazardous substances used at the site would need to be handled in accordance with applicable laws and regulations (Less than Significant).	Mitigation Measure 4.6-4: As necessary, retail outlets shall obtain the necessary permits for the use, storage and transportation of any hazardous substances involved in their operations. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
4.7 AIR QUALITY		
Impact 4.7-1: Construction activities associated with the project would generate dust that includes respirable particles known as PM ₁₀ (particles 10 microns or less in diameter). This would be a short-term adverse impact. (Less than Significant)	Mitigation Measure 4.7-1: To assure that construction-related dust emissions are maintained at a less than significant level and to reduce overall levels of dust emissions, a dust control plan shall be developed and implemented that includes the following measures: (1) limiting area of site disturbance to less than 15 acres on any given day; (2) regular watering of disturbed soil (at least twice per day); (3) hydroseeding of all cleared or graded areas if construction on the parcel is not expected to begin within 60 days; (4) washing construction site access points to public streets for a distance of 250 feet in each direction at the conclusion of each workday; and (5) terminating grading and other surface disturbance if winds exceed 25 mph. (Identified in the EIR)	Less than Significant
Impact 4.7-2: During construction activities, equipment exhaust would be generated, contributing to air quality emissions. (Less than Significant)	Mitigation Measure 4.7-2: All on-site construction equipment shall receive a low-NO _x tune-up prior to use at the site and shall be re-tuned after 90 days on the job site. Trucks or other equipment shall not be left to idle continuously for more than 10 minutes while waiting to load or unload. (Identified in the EIR)	Less than Significant
Impact 4.7-3: Traffic generated by the proposed project would incrementally increase regional vehicular emissions, but would not result in emissions exceeding BAAQMD significance thresholds. (Less Than Significant)	Mitigation Measure 4.7-3: The project sponsor shall require all site occupants to implement available transportation demand measures for employees and customers to reduce mobile source emission levels from project-related traffic to the extent feasible. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.7-4: Traffic generated by the project would result in incremental increases in localized carbon monoxide concentrations but would not create any violation of air quality standards. (Less than Significant)	Mitigation Measure 4.7.4: None required.	Not Applicable
Impact 4.7.5: Operation of the proposed project would create a stationary source of air pollutant emissions on-site due to minor combustion of natural gas for heating and cooking and add to off-site stationary source emissions due to electrical demand associated with the project. (Less than Significant)	Mitigation Measure 4.7-5: The proposed project shall maximize the use of energy-saving devices and energy conservation techniques, including applications to lighting, heating and cooling systems, to minimize the project's overall energy demand. (Identified in the EIR)	Less than Significant
<u>4.8 HYDROLOGY AND WATER QUALITY</u>		
Impact 4.8-1: The proposed project would result in an increase in the surface runoff generated at the site. (Less than Significant)	Mitigation Measure 4.8-1: In order to alleviate the potential for localized flooding effects from the project, site development plans shall include the construction of storm drainage facilities to accommodate runoff generated by the site. (Proposed as Part of the Project)	Less than Significant
Impact 4.8-2 (Cumulative): The proposed project would increase pollutant loads carried by surface runoff generated at the site and would contribute to cumulative deterioration of runoff quality. (SIGNIFICANT)	Mitigation Measure 4.8-2: In order to alleviate the potential for increased contamination of surface flows from the project, the project plans shall include the preparation and implementation of an adequate storm water pollution prevention plan (SWPPP) for the project. The SWPPP shall be submitted for review and approval by the RWQCB before the start of construction. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<u>4.9 NOISE</u>		
Impact 4.9-1: Proposed project construction would result in the exposure of Martin Luther King, Jr. Regional Shoreline recreation facility users to temporary noise peaks that would be perceived as intrusive. (SIGNIFICANT)	Mitigation Measure 4.9-1: The project sponsors shall implement the following mitigation measures to decrease noise associated with pile driving activities: • Pre-drill holes (if possible based on analysis of site soils) for piles to the maximum feasible depth to minimize the extent of pile driving necessary to construct project structures. • Shroud or shield impact noise due to pile driving in accordance with the manufacturer's recommendations. (Identified in the EIR)	Less than Significant
Impact 4.9-2: Implementation of the proposed project would result in noise increases along local roadways serving the proposed project. (Less than Significant)	Mitigation Measure 4.9-2: None required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.9-4: Project operation would increase noise levels at the project site due to on-site vehicle circulation, commercial loading/unloading activities, site maintenance equipment and stationary noise sources. (Less than Significant)	Mitigation Measure 4.9-4: None required.	Not Applicable
<u>4.10 BIOLOGICAL RESOURCES</u>		
Impact 4.10-1: Development of the proposed project would result in the filling of approximately 2.2 acres of man-induced palustrine emergent wetland habitat on-site. (Less than Significant)	Mitigation Measure 4.10-1: None Required.	Not Applicable
Impact 4.10-2: Project development would result in disturbance to, or direct mortality of, common wildlife species. (Less than Significant)	Mitigation Measure 4.10-2: None Required.	Not Applicable
Impact 4.10-3: Project development would directly destroy or degrade existing common vegetation. (Less than Significant)	Mitigation Measure 4.10-3: None Required.	Not Applicable

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
<u>4.11 PUBLIC SERVICES AND UTILITIES</u>		
Impact 4.11-1: Development of the proposed project would incrementally increase the need for fire protection services in the project area. (Less than Significant.)	Mitigation Measure 4.11-1: The project sponsors shall install a Fire Department approved automatic fire sprinkler system and other built-in protection, including heat/smoke alarms. The project sponsors shall also install Fire Department approved, electronically monitored fire alarm boxes at key locations on the project site. (Identified in the EIR)	Less than Significant
Impact 4.11-2: Development of the proposed project would increase the need for emergency medical aid services in the project area. (Less than Significant)	Mitigation Measure 4.11-2: None Required.	Not Applicable
Impact 4.11-3: Development of the proposed project would incrementally increase the need for police protection services in the project area. (Less than Significant)	Mitigation Measure 4.11-3: The project sponsors shall be required to provide adequate lighting on the site to discourage criminal activity and vandalism. The project sponsors shall also be required to submit written specifications for the hardware to be used on all doors, windows, and door frames to the Police Department. (Identified in the EIR)	Less than Significant
Impact 4.11-4: Development of the proposed project would create an additional demand of approximately 67,000 gallons per day of water. (Less than Significant)	Mitigation Measure 4.11-4: The proposed project shall incorporate all state and local water conservation requirements and fire flow demands into the project design. Also, both the State of California and EBMUD recommend additional water conservation measures that should be considered by the project sponsors. (Identified in the EIR)	Less than Significant

TABLE 2.1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Impact 4.11-5: Development of the proposed project would generate 50,000 gallons per day of wastewater. (Less than Significant)	Mitigation Measure 4.11-5: The proposed project shall incorporate all state and local water conservation requirements and fire flow demands into the project design; applicable water conservation measures shall be implemented. (Identified in the EIR.)	Less than Significant
Impact 4.11-6: Development of the proposed project would generate approximately 2.1 tons of solid waste per day. (Less than Significant)	Mitigation Measure 4.11-6: The project sponsors shall submit a litter control plan for the project site to the City of Oakland Office of Planning and Building. In addition, the project sponsors, in conjunction with the City, shall review project design for sufficient allocated space and capacity to accommodate an aggressive waste diversion program/recycling program that achieves the diversion levels required under AB 939. (Identified in the EIR)	Less than Significant
Impact 4.11-7: Development of the proposed project would create a new demand for electrical and gas services to the project site. (Less than Significant)	Mitigation Measure 4.11-7: None Required.	Not Applicable
Impact 4.11-8: Development of the proposed project would create a new demand for communication services at the project site. (Less than Significant)	Mitigation Measure 4.11-8: None Required.	Not Applicable

2.3 ALTERNATIVES TO THE PROJECT

The following is a summary of the alternatives to the proposed project that are addressed in this EIR.

ALTERNATIVE 1: NO PROJECT

Under the No Project Alternative, the site would remain in its current undeveloped state, as described in the Environmental Setting section of this EIR. The site would continue in City ownership, and would remain available for future development by the City, or other future developer(s) as determined by the City.

Under this alternative, none of the impacts resulting from construction or operation of the proposed project would occur. Price-Costco could continue to operate its existing San Leandro Costco store, or could elect to relocate the store elsewhere than the project site. The No Project Alternative would be considered an environmentally superior alternative to the proposed project but it would not achieve the project sponsors' objectives, which include developing a successful regional destination retail shopping center; providing general merchandise and discount retail service to the City's residents, workers and small businesses; and strengthening the City's retail base.

ALTERNATIVE 2: 219,000 GROSS SQUARE FEET OF RETAIL

Alternative 2 assumes that approximately 2.2 acres along the southwestern boundary of the site that comprise a man-made stormwater treatment facility would be determined by the U.S. Army Corps of Engineers ("COE") to be wetlands that are not exempt from its jurisdiction. Under this alternative, the 2.2-acre area would be partitioned from the remainder of the site (e.g., by a fence or other protective barrier) and left undeveloped. The remainder of the project site would be developed to contain approximately 219,000 gross square feet (gsf) of value-oriented retail uses, 1,021 parking spaces, landscaping, lighting, loading areas, and dedicated open space with a public walkway within the 100-foot BCDC shoreline jurisdictional zone. Like the proposed project, this alternative would include a warehouse anchor tenant, Price-Costco, that would occupy approximately 135,000 gsf in the southeasterly 13.5 acres of the site. The remaining value-oriented retail uses (assumed to be category stores in this alternative) in the northerly 9.1 acre portion of the site would be reduced by 30,000 gsf from the proposed project, to approximately 84,000 gsf. This floor area would comprise two stores of approximately 34,000

gsf each and one store of 16,000 gsf. The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans. However, maximum building heights would remain 37 feet.

This alternative would result in significant impacts to traffic and parking, noise, geology and seismicity, hazardous materials, and hydrology and water quality.

Alternative 2 would be considered an environmentally superior alternative because it would reduce the magnitude of significant project traffic, parking, water quality, and seismic impacts, although not to less than significant levels. Alternative 2 could reduce impacts on weaving operations on I-880 that are significant and unavoidable under the proposed project to a less than significant level. Air quality and operational noise effects, although not significant under the proposed project, would also be reduced in magnitude in Alternative 2.

ALTERNATIVE 3: 275,000 GROSS SQUARE FEET OF RETAIL

Alternative 3, like the proposed project, assumes that the 2.2 acres of man-induced palustrine emergent wetlands identified on-site would be exempt from the jurisdiction of the COE and would therefore be developed. The project area would contain approximately 275,000 gsf of value-oriented retail uses, 1,210 parking spaces, landscaping, lighting, loading areas, and dedicated open space that would include landscaping and a public walkway within the 100-foot BCDC shoreline jurisdictional zone. The alternative would include a warehouse anchor tenant, Price-Costco, in the southeast corner of the project site that would occupy approximately 156,000 gsf, or 21,000 gsf more than with the proposed project. In the northwest portion of the site, three smaller value-oriented retail uses would occupy stores of approximately 23,000 gsf (general retail store), 65,000 gsf and 31,000 gsf (both category stores) each, for a total of 119,000 gsf, 4,000 gsf more than the proposed project.

The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans. As with the proposed project, maximum building heights would be 37 feet.

This alternative would result in significant impacts to traffic and parking, noise, geology and seismicity, hazardous materials, air quality, and hydrology and water quality. As with the proposed project, some circulation and parking impacts under this alternative would be significant and unavoidable. Under Alternative 3, these impacts would increase in magnitude as

compared with the proposed project. In addition, hydrocarbon emissions would be a significant unavoidable impact of Alternative 3.

ALTERNATIVE 4: 350,000 GROSS SQUARE FEET OF RETAIL

Alternative 4, like the proposed project and Alternative 3, assumes the 2.2-acre man-induced palustrine emergent wetland area identified on-site would be exempt from COE jurisdiction and that the entire site would be developed. This alternative would contain approximately 350,000 gsf of value-oriented retail uses, a minimum of 1,750 parking spaces, landscaping, lighting, loading areas, and dedicated open space that would include landscaping and a public walkway within the 100-foot BCDC shoreline jurisdictional zone. The alternative would include a warehouse tenant, Price-Costco, that would occupy approximately 156,000 gsf, 139,000 gsf of category store space and 55,000 gsf of general retail uses. Development of 350,000 gsf of commercial uses under this alternative could require multi-story buildings with heights up to 50 feet, and could also require development of structured parking or, alternatively, roof-top parking. The need for increased building heights and/or structured parking cannot be determined until preliminary site plans and building designs have been developed. The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans.

This alternative would result in significant impacts to traffic and parking, noise, geology and seismicity, hazardous materials, air quality, and hydrology and water quality; as compared with the proposed project, the magnitude of these impacts would increase. The significant air quality effects resulting from Alternative 4, as well as its significant effects on intersection and freeway ramp operations, would be unavoidable impacts. Noise impacts under this alternative could reach significant levels.

ALTERNATIVE 5: OFF-SITE PROJECT DEVELOPMENT

Alternative 5 considers development of the 250,000 gsf project at another location in the City, the 21-acre Ratto/Hamerskjold School site, located west of Empire Road between Hegenberger Road and 98th Avenue. The Hamerskjold site is currently a vacant school site with adjoining undeveloped land. The alternative would include the same mix and square footages as the proposed project, but the shapes and locations of building footprints would be different from the proposed project, as would be the parking and circulation plans.

Development of this site for the Coliseum Shoreline Project would fulfill all of the project sponsors' objectives except one: to develop the center in a highly visible freeway location with direct access. The Hamerskjold site is not visible from I-880, nor is it readily visible from either Hegenberger Road or 98th Avenue.

Alternative 5 would be considered an environmentally superior alternative because it would avoid significant impacts of the proposed project on ramp and intersection operations at the 66th Avenue/I-880 Interchange and on freeway weaving operations that cannot be reduced to less than significant levels.

This alternative would likely result in significant impacts to visual quality, traffic, transportation, circulation and parking, geology and seismicity, hazardous materials, air quality, hydrology and water quality, and noise.

ALTERNATIVES CONSIDERED BUT REJECTED

A number of alternatives were considered but rejected because the alternatives would result in substantially similar significant impacts to those of the proposed project or in additional significant impacts, or because the alternatives would fail to satisfy one or more of the sponsors' project objectives, or both. The alternatives rejected and withdrawn from detailed consideration include the following: development of the project site with 400,000 gross square feet of value-oriented retail uses; the EBMUD Surplus Site located along Oakport Street north of 66th Avenue; land adjacent to the Fruitvale BART Station, between East 12th and East 14th Streets; land adjacent to the Coliseum BART Station, east of San Leandro Avenue; and, land adjacent to the Coliseum BART Station, west of San Leandro Avenue.

2.4 AREAS OF CONTROVERSY

The City of Oakland has received letters commenting on the proposed project, both prior to and in response to its Notice of Preparation (NOP) for the Coliseum Shoreline Environmental Impact Report (EIR). The City held a scoping session open to the public at its offices on April 20, 1994 in its offices at 1330 Broadway; no members of the public or responsible and interested agency staff attended that meeting.

Letters commenting on the proposed project have raised a number of issues not necessarily related to the project and concerning potential impacts on scenic quality, biological resources,

water quality, traffic and transit service, and recreational facilities in the project site vicinity. Those issues are addressed, where warranted, in the technical analyses of project impacts provided in Section 4 of this EIR.

NOTES - Summary

- 1 Warehouse stores typically range from 105,000 to 170,000 square feet and carry a wide variety of merchandise with limited selection, sold at wholesale and discount prices. Stock can include groceries, housewares, small electronics, books, auto supplies, gifts, beverages, computers, and office supplies. Examples include Price Club/Costco, and Sam's Club.
- 2 Category stores, also called "category busters" carry a single type of product (e.g., toys, books, office supplies, electronics, value drugs, off-price clothing). They typically range from 20,000 to 60,000 square feet. Examples include Toys R Us, Crown Books, Circuit City, Payless Drugs, Burlington Coat Factory and Ross.
- 3 General Retail is all other retail uses, including value-oriented discount department stores (e.g., K-Mart, Walmart, Target,), supermarkets, and restaurants. There is no typical size because general retail can have a wide range in square footage.

3.0 PROJECT DESCRIPTION

3.1 PROJECT SPONSOR'S OBJECTIVES

The project sponsors, the City of Oakland, and Price-Costco, have the following objectives for the Coliseum Shoreline Project:

- to develop a successful regional destination retail shopping center;
- to develop the center in a highly visible freeway location with direct access;
- to provide general merchandise, discount retail service to the City's residents, workers and small businesses;
- to increase employment opportunities;
- to strengthen the City's retail base; and
- to strengthen the City's tax base.

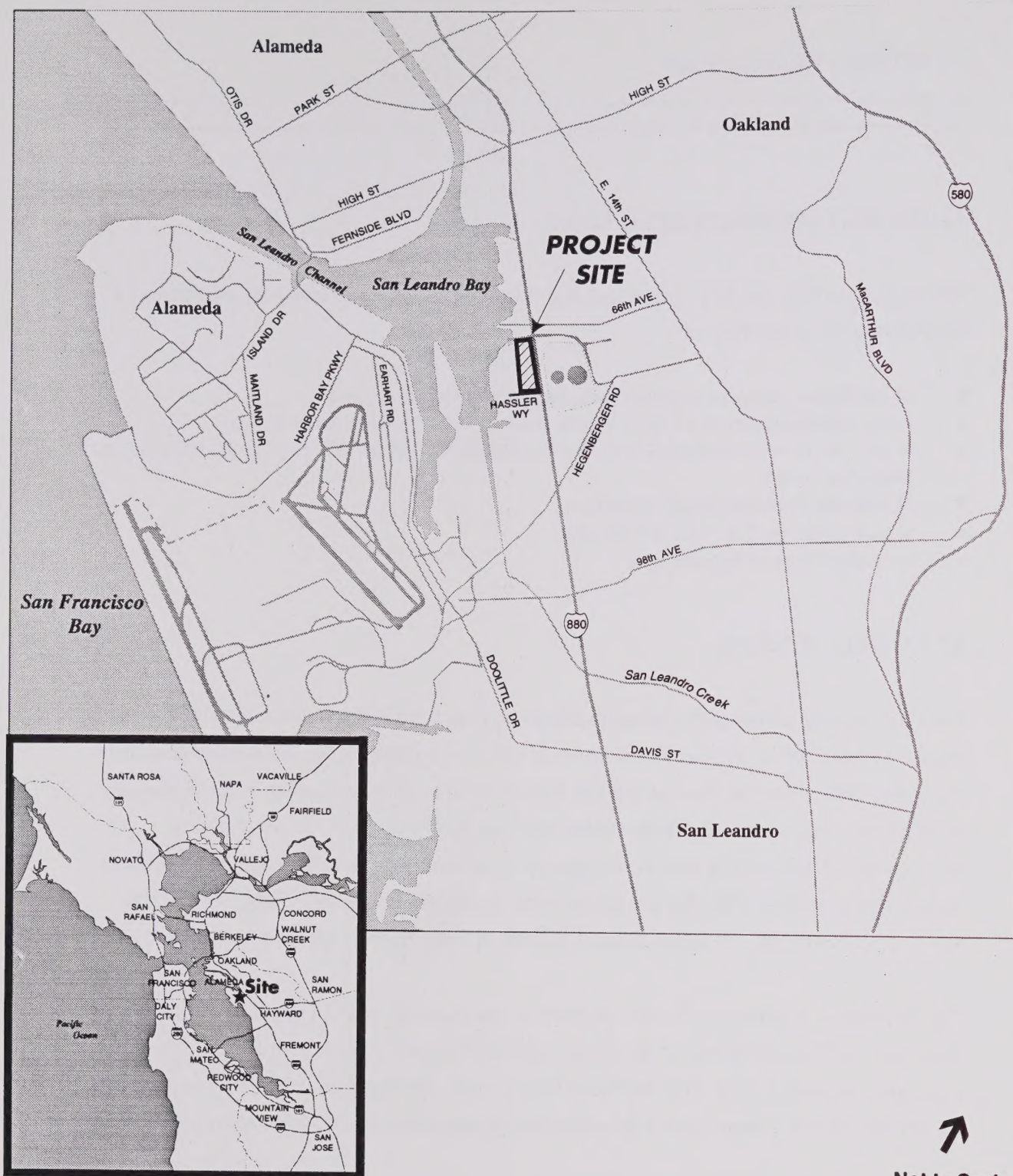
3.2 PROJECT HISTORY

The City's actions related to the Coliseum Shoreline Project have been consistent with the objectives listed above. Active consideration of site development by the City commenced in December 1992, when the City entered into a memorandum of understanding with the Port of Oakland regarding the transfer of site ownership from the Port to the City. At that time, development of this site was seen as an opportunity to create a value-oriented retail center in an underserved area of the City that was in a location readily accessible from Interstate 880 ("I-880"). Specifically, the site is just south of the 66th Avenue freeway off- and on-ramps.

The City refined its objectives for development of the site, then issued a public Request for Proposal ("RFP") to all interested developers and development teams.¹ A number of interested developers responded to the RFP, including Price-Costco. Subsequently, the City and Price-Costco entered into a memorandum of understanding regarding the Coliseum Shoreline Project.

3.3 PROJECT LOCATION

The project site is located in the southwestern portion of the City of Oakland in Alameda County, adjacent to I-880 and immediately opposite the Oakland-Alameda County Coliseum Arena complex (see Figure 3.1). The site consists of Assessors Parcel No. 041-3902-015, a



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 3.1
Project Site Location

roughly rectangular, elongated parcel of approximately 22.6 acres (984,063 sq. ft.) bounded on the northeast by Oakport Street (an I-880 frontage road), on the northwest by Damon Slough, on the southwest by Southern Pacific Railroad spur tracks, and on the southeast by Hassler Way (see Figure 3.2). These railroad spur tracks only serve users located along the tracks. Currently, the spur tracks provide access to two users, only one of which is actively receiving rail shipments.²

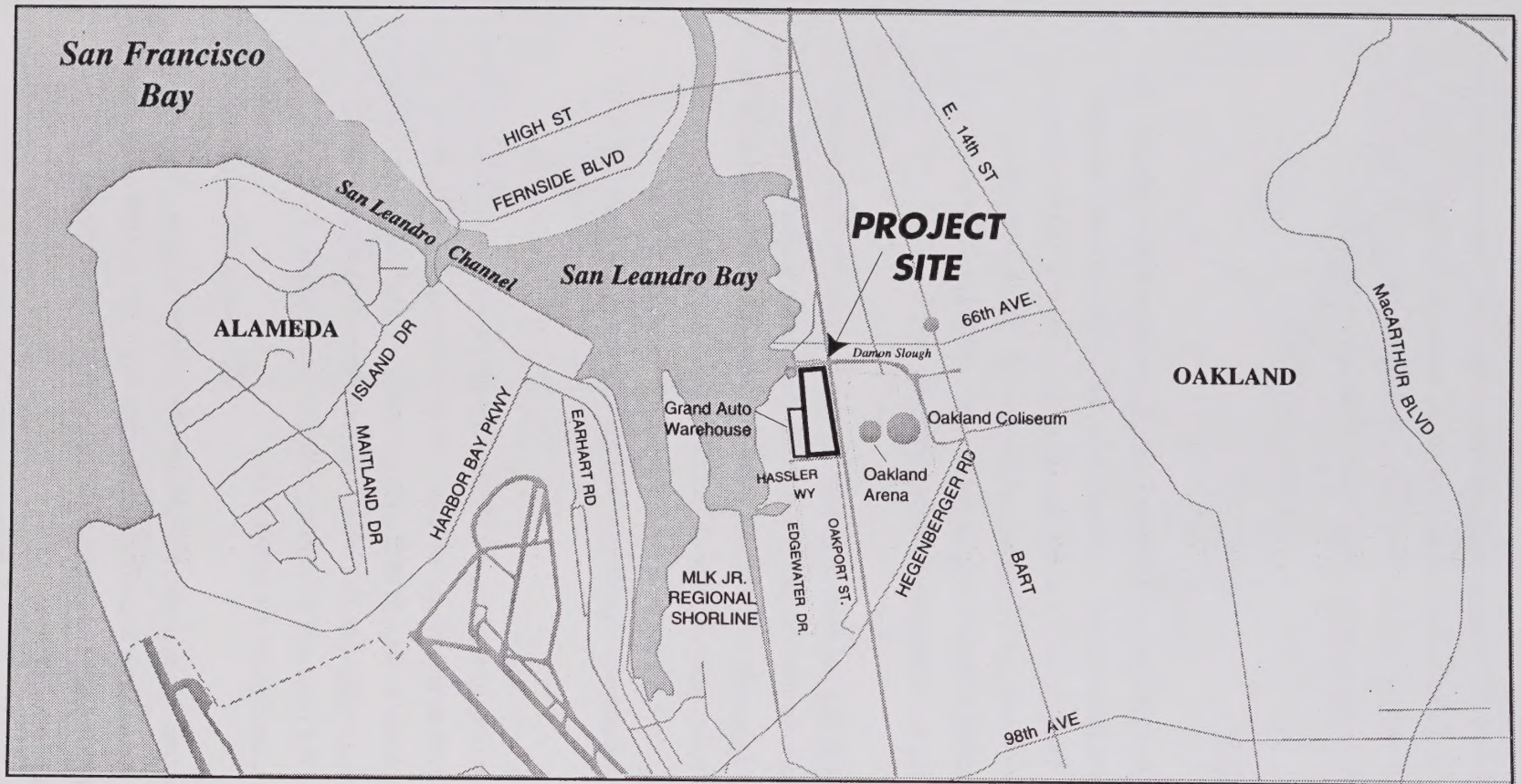
3.4 SITE CHARACTERISTICS

The project site is a generally flat 22.6 acre parcel that is currently vacant and undeveloped. The site is within the Oakland Airport Business Park, has been reserved for development consistent with other business park uses. The dimensions of the site are approximately 2,030 feet along its northeastern boundary (Oakport Street) and its southwestern boundary (Southern Pacific Railroad spur tracks), approximately 488 feet along its northwestern boundary (Damon Slough), and approximately 470 feet along its southeastern boundary (Hassler Way).

The site is covered by fill material that has been graded for stormwater retention and drainage. The eastern half of the site drains towards Oakport Street, while the western half of the site drains into a stormwater retention/settling basin facility. The upland portions of the site have typical, introduced upland vegetative ground cover. The western stormwater facility has vegetative ground cover that is characteristic of excavated temporarily flooded palustrine emergent wetlands. For more information regarding on-site biotic habitats, see Section 4.10 of this EIR.

Prior to the transfer of site ownership to the City, the fill material placed on the site was sampled and studied by the Port of Oakland to identify possible soil and groundwater contaminants.³ Elevated lead levels have been found in the soil by the Port's consultant, and the Port has taken steps to both notify the proper authorities (the U.S. Environmental Protection Agency) and to remove the contaminated soil. For more information regarding the remediation of potential contaminants at the project site, see Section 4.6 of this EIR.

The site is within the planning area for the proposed Coliseum Area Redevelopment Plan. This area of approximately 6,500 acres extends from Fruitvale Avenue to the San Leandro City line, and from Metropolitan Oakland International Airport's North Field to East 14th Street. The Redevelopment Plan is currently in preparation.



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 3.2
Detailed Project Site Location

3.5 PROJECT CHARACTERISTICS

The Coliseum Shoreline Project would consist of a value-oriented, general merchandise, retail shopping complex on the 22.6 acre site, comprising a maximum of approximately 250,000 total gross square feet (gsf) of floor space, 1,296 parking spaces (5.2 spaces per 1000 gsf), uniform design guidelines, and associated landscaping, lighting, loading and on-site circulation improvements (see Figure 3.3). The project also would include dedicated open space alongside Damon Slough, including a public access trail; improved bicycle routes/lanes; and improvements to Oakport Street. Access to the project would be from Oakport street via both Hassler Way and 66th Avenue. Access to other East Bay communities is available via I-880 and 66th Avenue.

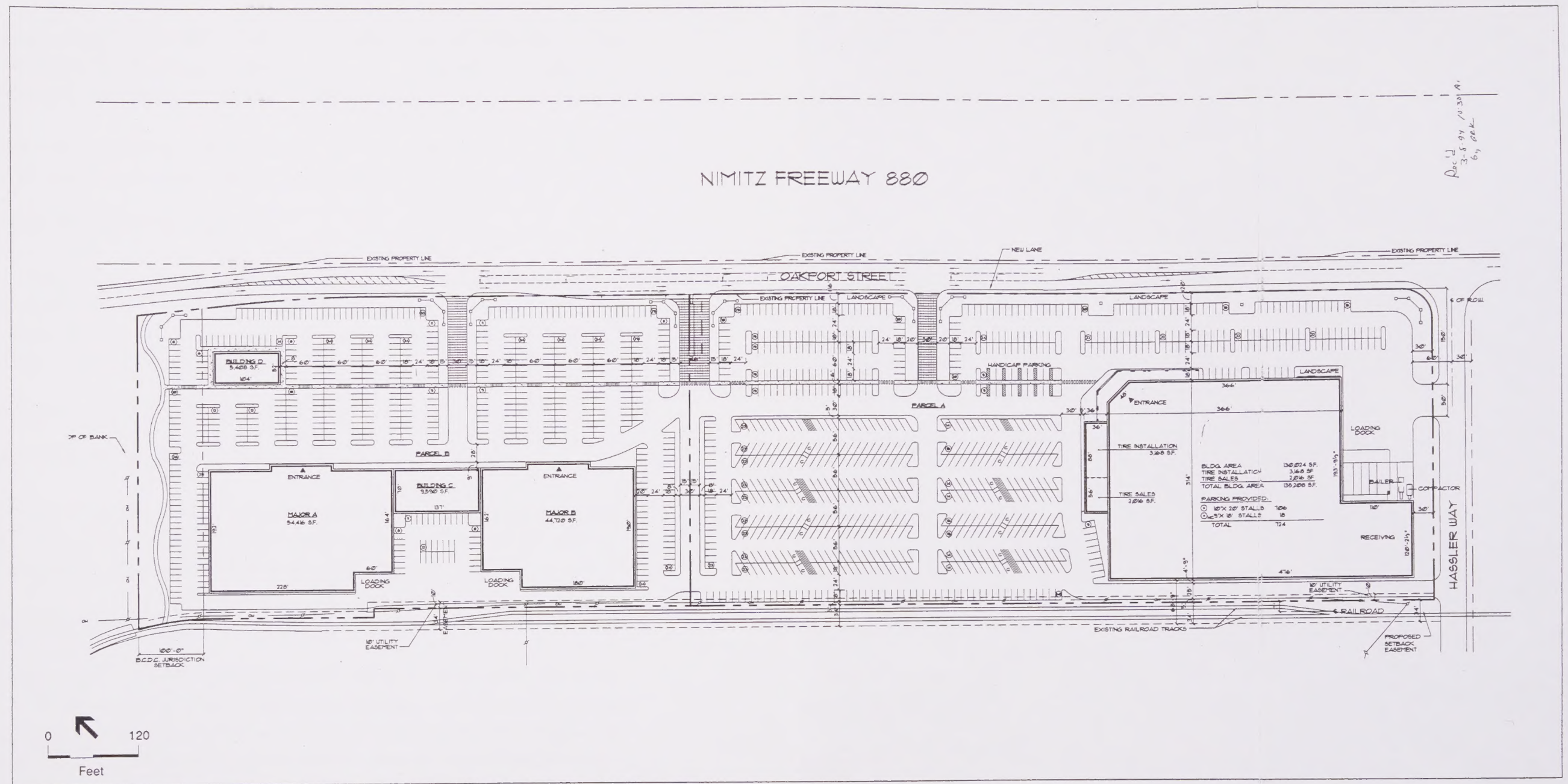
The project would include a major "warehouse"⁴ commercial anchor tenant, Price-Costco, occupying a store of about 135,000 gsf on 13.5 acres, and two smaller "category"⁵ tenants, occupying stores of approximately 45,000 to 55,000 gsf each on the remaining 9.1 acres. Approximately 15,000 additional gsf of value-oriented "general"⁶ retail uses would be provided in two additional smaller buildings of approximately 10,000 and 5,000 gsf each. The maximum height of project structures would be approximately 37 feet.⁷ Price-Costco would occupy a portion of the southeastern end of the site and the other tenants (undetermined at this time) would occupy portions of the northwestern end of the site. The 13.5 acre Price-Costco portion would be developed initially, followed by development of the northerly 9.1 acres.

In addition, the City would grant an easement to Price-Costco on the 1.46 acre parcel of land that includes the Southern Pacific Railroad spur tracks adjacent to the southwest boundary of the project site to satisfy the 60-foot setback requirement of the Uniform Building Code. No development would take place on this 1.46 acre parcel of land.

The project includes the dedication of open space alongside Damon Slough, within the 100 foot BCDC jurisdictional area. The dedicated public open space would include a public access trail, and possibly, vista points, a rest area, and shoreline educational monuments.

Other integral components of the project include the redesign of Oakport Street to include deceleration/acceleration lanes along the project frontage to enhance traffic safety, provision of sidewalks along the frontage, and improved bicycle routes/lanes.

Price-Costco has publicly announced its intent to close its existing 110,000-square-foot Costco store in San Leandro.⁸ Accordingly, the EIR considers closure of the San Leandro Costco



SOURCE: Mulyanny Partnership

as a reasonably foreseeable indirect effect of the proposed project, and analyzes the impacts of terminating operations at the San Leandro site on traffic, noise, air quality, and population, housing, and employment in the vicinity of the project site.

Details of the project cost and schedule are not available at this writing. For the purpose of this EIR, the project is assumed to be completed and operational in 1995.

3.6 PROJECT APPROVAL PROCESS

The proposed project would require basic approvals by the City of Oakland. The City of Oakland is the Lead Agency for the purposes of environmental review, consistent with CEQA *Guidelines* Section 15051(d). The City of Oakland is responsible for certification of this EIR as complete and adequate.

ACTIONS BY THE CITY OF OAKLAND

Certification of the Environmental Impact Report

Prior to approval of the project, the EIR must be certified by the City of Oakland's Planning Commission. If any planning approvals are appealed to the City Council, the EIR must be recertified by the Council prior to its approval of the project.

Major Conditional Use Permit

The site is currently zoned M-40, Heavy Industrial. This zoning classification is intended to create, preserve, and enhance areas containing manufacturing or related establishments that are generally incompatible with other uses and have extensive shipping or rail requirements. The Land Use Element of the Oakland *Comprehensive Plan* notes that "an admixture of some nonindustrial uses is appropriate within industrial areas, though the types and scale depend on the specific kind of area." The Land Use Element goes on to identify the Oakland Airport Business Park as "a special case" industrial area.

The M-40 Zone permits general retail use by a single retail establishment of less than 3,000 square feet in floor area. Because the proposed project would contain more than 3,000 square feet of floor area, it would require approval by the Oakland Planning Commission of a Major Conditional Use Permit ("MCUP"). The Commission's action on the MCUP would be

appealable to the City Council. The Conditional Use Permit procedure allows for uses not permitted by right that are consistent with approved plans for the area, and that conform to specific criteria, including but not limited to, compatibility with abutting properties and the surrounding area, enhancement of the surrounding area in terms of basic community functions, and appropriate design, site planning, and operating characteristics.

Parcel Map

The project sponsors will file a Parcel Map to split the existing parcel into two lots, including the southerly 13.5 acres that would accommodate the Price-Costco warehouse store, and the northerly 9.1 acres that would accommodate the remainder of the development. The Parcel Map would be subject to approval by the Planning Commission. The Commission action on the Parcel Map would be appealable to the City Council.

Disposition and Development Agreement

The City would enter into a Disposition and Development Agreement ("DDA") regarding the transfer of ownership of the southerly 13.5 acres to Price-Costco, along with the terms of the subsequent development of the Price-Costco store, the disposition of the remaining 9.1 acres, and the ultimate development of that 9.1 acres. The DDA would be subject to approval by the City Council.

Development Approvals

Subsequent to certification of the EIR, detailed review of the proposed design would be required. Construction of the proposed retail structures would require the issuance of grading and building permits.

ACTIONS BY OTHER AGENCIES

San Francisco Bay Conservation and Development Commission

The Bay Conservation and Development Commission ("BCDC") has jurisdiction over San Francisco Bay and a zone of shoreline extending 100 feet inland from the line of highest tidal action. BCDC would exercise permit authority over any alterations to the shoreline of the site abutting Damon Slough, which experiences tidal action. Because the project would include

parking and dedicated open space with pedestrian and landscaping improvements within BCDC's jurisdictional limit, BCDC would require a shoreline alteration permit for the project.

U.S. Army Corps of Engineers

Section 404 of the Federal Clean Water Act regulates discharge of fill material into "waters of the United States," which include wetlands. Under the Clean Water Act, the U.S. Army Corps of Engineers ("COE") must issue a permit for any project that proposes to fill wetlands of more than one acre. If the COE finds the palustrine emergent wetlands associated with the stormwater detention/setting basin facility adjacent to the Southern Pacific railroad tracks along the southwest boundary of the site to be subject to its jurisdiction, a permit would be required.

Oversight of Site Remediation

The Alameda County Environmental Health Services Agency, Department of Environmental Health, will review any submitted plans for site remediation. As mentioned earlier in this section of the EIR, the Port of Oakland has conducted an investigation of the on-site fill material with respect to possible soil and groundwater contaminants, found elevated lead levels in the soil, and taken steps to both notify the proper authorities (the U.S. Environmental Protection Agency) and to remove the contaminated soil. Upon completion of remediation activities, the contractors performing the remediation will submit reports of completion to Alameda County, the Regional Water Quality Control Board, and the City. For more information regarding the remediation of fill material, see Section 4.6 of this EIR

The project may require various other permits and approvals from other public agencies, including:

- Regional Water Quality Control Board (General Construction Activity and Storm Water Runoff permits);
- California Department of Transportation (Encroachment Permit for roadway improvements); and
- California Department of Fish and Game (Streambed Alteration Permit for Damon Slough).

NOTES - Project Description

- 1 City of Oakland, Office of Economic Development and Employment, *Request for Proposals, Coliseum Shoreline Project*, April 1993.
- 2 CNEL stands for Community Noise Equivalent Level. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that for planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). The City of Oakland's noise guidelines are based on both the CNEL and Ldn descriptors. Ldn is similar to CNEL in that they both add a 10-dBA penalty to all noise events between 10:00 pm and 7:00 am; CNEL also adds a penalty during the evening hours between 7:00 pm and 10:00 pm. In practice, Ldn and CNEL usually do not differ by more than one to two dBA at any given location.
- 3 Baseline Environmental Consulting, Phase II Site Investigation, Oakport Parcel, January 1991.
- 4 Warehouse stores typically range from 105,000 to 170,000 square feet and carry a wide variety of merchandise with limited selection, sold at wholesale and discount prices. Stock can include groceries, housewares, small electronics, books, auto supplies, gifts, beverages, computers and office supplies. Examples include Price Club/Costco, and Sam's Club.
- 5 Category stores, also called "category busters" carry a single type of product (e.g., toys, books, office supplies, electronics, value drugs, off-price clothing). They typically range from 20,000 to 60,000 square feet. Examples include Toys R Us, Crown Books, Circuit City, Payless Drugs, Burlington Coat Factory and Ross.
- 6 General Retail is all other retail uses, including value-oriented discount department stores (e.g., K-Mart, Walmart, Target,), supermarkets, and restaurants. There is no typical size because general retail can have a wide range in square footage.
- 7 Preliminary evaluation supplied by the City for use in preparation of this project description indicate a maximum height of approximately 37 feet (east elevation).
- 8 Anderson, Craig, "Price-Costco may pick up stakes in San Leandro," *The Daily Review*, 18 May 1994.

4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

4.1. LAND USE AND POLICY ANALYSIS

A land use survey was conducted in May 1994, to identify existing uses adjacent to and in the vicinity of the project site. The information in the Setting section, below, is based primarily on field observations from that survey.

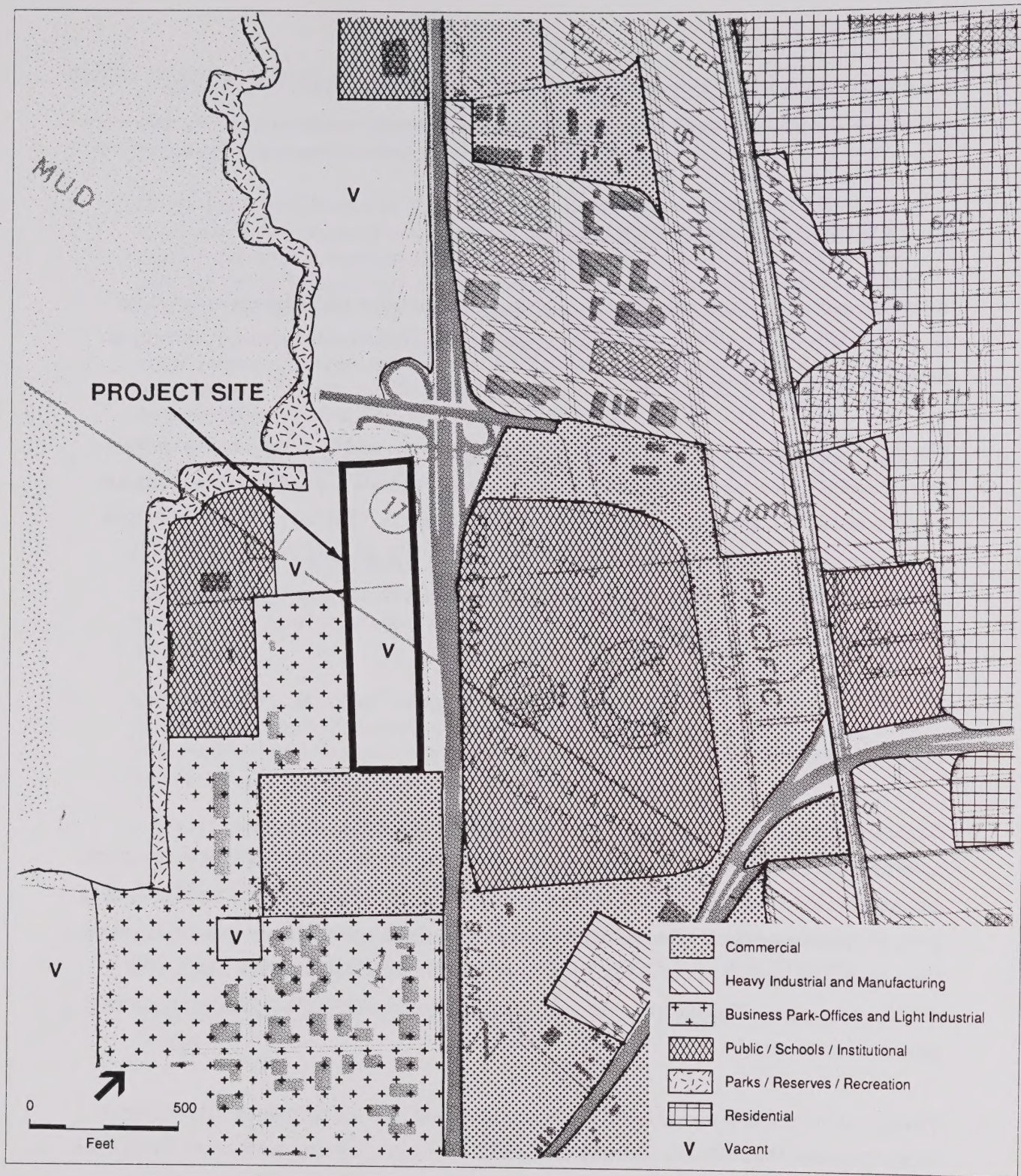
The site of the proposed Coliseum Shoreline Project is near the middle of the proposed 6,500-acre Coliseum Redevelopment Area, which extends from Fruitvale Avenue to the San Leandro City line and from Metropolitan Oakland International Airport's ("MOIA") North Field to East 14th Street, and for which a Redevelopment Plan is currently in preparation. As used in this EIR, the designation "Coliseum Area" refers to the general area surrounding the proposed project site as shown in Figure 4.1.1.

SETTING

Coliseum Area

Land uses in the Coliseum Area are diverse and include older industrial, commercial and residential uses, as well as newer offices, hotels and retail uses. About one-third of the land uses are commercial or industrial; about one-fifth are residential; about one-fourth of the area is taken up by MOIA or airport-related activities; and approximately one-tenth is open space or is vacant. Open space uses include part of the Martin Luther King, Jr. Regional Shoreline and several neighborhood parks. The Oakland-Alameda County Coliseum and Arena are major recreational attractions in the area.¹

Transportation facilities, including MOIA, are a significant land use in the area. The Southern Pacific Railroad, Union Pacific Railroad, and BART have tracks running north-south through the area. The Fruitvale and Coliseum BART stations are located in the Coliseum Area. Major north-south thoroughfares include Interstate 880 ("I-880"), East 14th Street and San Leandro Street. The major east-west thoroughfares are High Street, 66th Avenue, Hegenberger Road and 98th Avenue.



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.1.1
Generalized Existing Land Uses

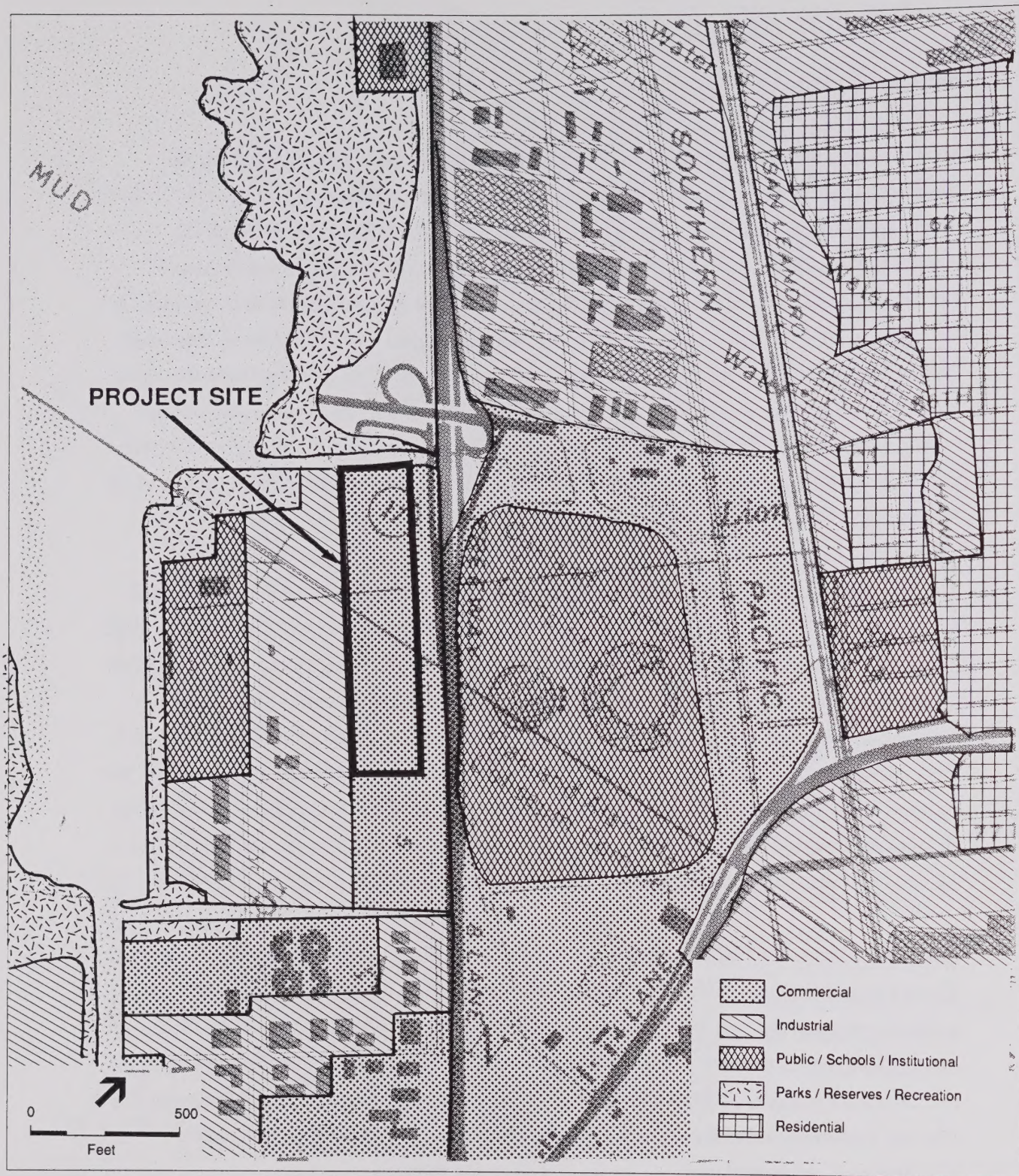
Immediate Vicinity

Most land uses in the immediate vicinity of the project are business park/light industrial, commercial (including retail and office), public structures or roads/freeways. Figure 4.1.1 shows generalized existing land uses in the project vicinity. The project site is bordered on the southeast by the 12-story UNISYS Airport Corporate Center. On the southwest, Southern Pacific Railroad spur tracks run the length of the site. On the west side of the railroad tracks is the Grand Auto West Warehouse and a vacant, undeveloped lot. The area between these uses and the Bay is occupied by a City of Oakland service yard and a light industrial business park. Most of the remaining area to the south and southeast of the site is characterized by "tilt-up" buildings in small industrial and business parks. Damon Slough forms the northwest boundary of the site. Across the slough is a large vacant, undeveloped parcel that includes a ribbon of the Martin Luther King, Jr. Regional Shoreline park along its edge.

The northwest boundary of the site is Oakport Street. Across Oakport is I-880, an eight-lane freeway that is elevated slightly above the project site. Directly across I-880 from the site is the Oakland-Alameda County Coliseum and Arena Complex. The Coliseum Complex is ringed on the three remaining sides by retail uses, including a warehouse retail center to the southeast. Adjacent to the retail uses are large areas of heavy industrial and manufacturing uses. Beyond these are residential neighborhoods. The Coliseum BART station is situated directly across San Leandro Street from the Coliseum. In all, the land uses in the site vicinity can be characterized as primarily industrial, with heavy industrial/manufacturing occurring on the Oakland Coliseum side of I-880 and light industrial/business park uses occurring on the project side of I-880.

Figure 4.1.2 shows the City's *Comprehensive Plan*² Land Use Designations for the site vicinity. The designated land uses in this local area include residential, commercial, industrial, public/institutional and park/open space uses. The designations do not differ greatly from existing land uses in the area. The *Plan* designates land for commercial use in pockets around the Coliseum Complex, on the project site, and to the southeast of the site. Industrial areas in the *Plan* are near and between the railroads, and near Hegenberger Road. Open space uses, including park and natural uses, are designated along the shoreline.

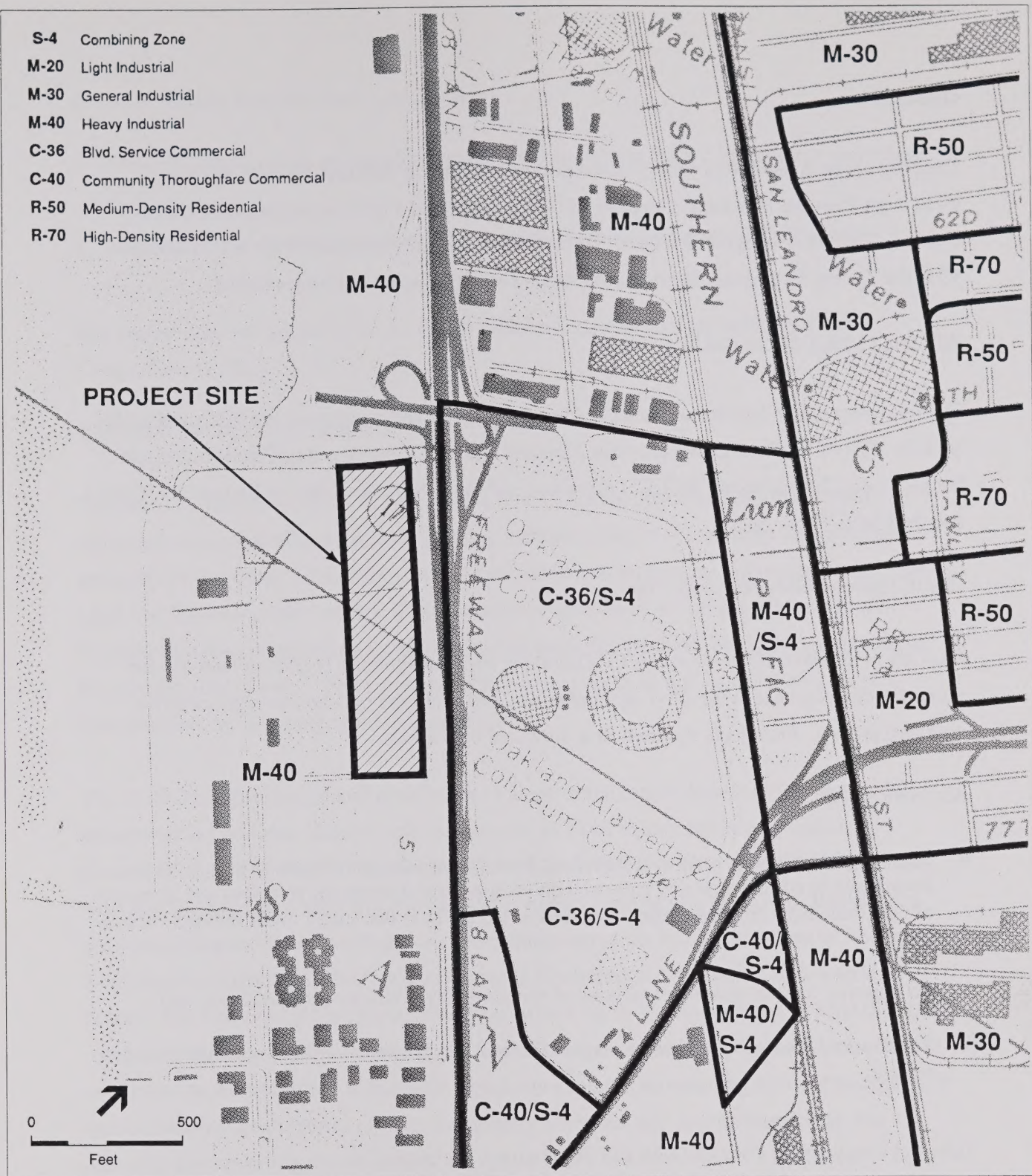
The *Comprehensive Plan* also provides guidance for the appropriate location of land uses. Related businesses are to be grouped; development is to be densest near BART stations; and, residential areas are to be located where noise levels are low. Also, land is to be provided for uses related to the airport and the Port.



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.1.2
Comprehensive Plan
Land Use Designations



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.1.3
Zoning Map

Project Site

The project site is used for a variety of temporary activities at different times of the year, including Christmas tree sales, pumpkin sales, carnivals, and overflow parking for Coliseum events.⁴ The site is designated for commercial use in the *Comprehensive Plan* and is zoned M-40 in the Zoning Ordinance; however, the site is currently vacant and undeveloped.

Relevant Plans, Policies and Regulations

The following public entities and associated plans, policies and regulations are discussed in this section: City of Oakland *Comprehensive Plan* and Zoning Ordinance; Bay Conservation and Development Commission ("BCDC") *Bay Plan*; and the U.S. Army Corps of Engineers ("COE") and the Clean Water Act.

City of Oakland *Comprehensive Plan*

The City of Oakland *Comprehensive Plan* contains goals and policies regarding land use and economic development in the City. A number of these goals and policies are relevant to the proposed project. Plan goals are cited first, followed by policies.

Economic Goals

- To strengthen the City's non-residential tax base through the stimulation of private sector investment in commercial and industrial enterprises, and through the retention and attraction of economic activity beyond improvements in the tax base that might occur through current trends;
- To improve socio-economic conditions of economically disadvantaged residents; and
- To advance Oakland's position as a regional center of commerce, industry, recreation and culture.

Jobs and Employment Policies (Jobs and Employment Element)

- Encourage industries that are economically viable and provide entry level jobs and opportunities for upward mobility.

Land Use Policies Regarding Economic Development (Land Use Element)

- Make more intensive use of vacant, underutilized and derelict land.

Land Use Pattern Policies (Land Use Element)

- Housing, employment or shopping should concentrate near BART stations and major bus routes.
- The intensity of development should relate to the degree of accessibility of the area.

The project does not appear to be in conflict with any relevant goals or policies of the *Comprehensive Plan*.

City of Oakland Zoning Ordinance

The site is currently zoned M-40, Heavy Industrial. This zoning classification is intended to create, preserve, and enhance areas containing manufacturing or related establishments that are generally incompatible with other uses and have extensive shipping or rail requirements. The Land Use Element of the Oakland *Comprehensive Plan* notes that "an admixture of some nonindustrial uses is appropriate within industrial areas, though the types and scale depend on the specific kind of area." The Land Use Element goes on to identify the Oakland Airport Business Park as "a special case" industrial area.

The M-40 Zone permits general retail use by a single retail establishment of less than 3,000 square feet in floor area. Retail projects in excess of 3,000 square feet are conditionally permitted; i.e., Conditions of Approval would be placed on the project to ensure compatibility with the Oakland *Comprehensive Plan* and with adjacent and nearby land uses. Because the proposed Coliseum Shoreline Project would contain more than 3,000 square feet of floor area, it would require approval by the Oakland Planning Commission of a Major Conditional Use Permit. The Conditional Use Permit procedure allows for uses not permitted by right that are consistent with approved plans for the area, and that conform to specific criteria, including but not limited to, compatibility with abutting properties and the surrounding area, enhancement of the surrounding area in terms of basic community functions, and appropriate design, site planning, and operating characteristics.

There are no height limits in M-40 Districts, unless development would abut a residential zone, which the proposed project would not. Generally, there are no minimum setbacks required and there is no floor-to-area ratio listed in the zoning ordinance. For M-40 Districts, signs over 700 square feet require a conditional use permit; no advertising sign can extend above the roof line or parapet wall; and signs not attached to a building cannot be over 35 feet above finished grade.

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission ("BCDC"), created by the McAtter-Petris Act in 1965, has jurisdiction over San Francisco Bay to the line of highest tidal action and over a 100-foot shoreline band inland from the line of highest tidal action. BCDC would have permit authority over any alterations to the shoreline within this 100-foot band, if proposed as part of the project. BCDC administers the McAtter-Petris Act, the *San Francisco Bay Plan*, and the Federal Coastal Zone Management Act. The *Bay Plan* contains two fundamental objectives:⁴

- (1) To protect the Bay as a natural resource for the benefit of present and future generations.
- (2) To develop the Bay and its shoreline to their highest potential with a minimum of bay filling.

BCDC jurisdiction in the project area includes a shoreline band of 100-feet inland of and parallel to Damon Slough, which experiences tidal action. Damon Slough is the northwest boundary of the site. Because site plans for the project include parking, and dedicated open space within the 100-foot jurisdictional band (see Figure 3.3, Site Plan), BCDC would require a shoreline alteration permit for the project.

BCDC's responsibilities under the McAtter-Petris Act also require ensuring that maximum feasible public access to the Bay be provided within the shoreline band. Before deciding to issue a permit for shoreline alteration, the Commission must determine that a project is in accordance with standards in the following three areas, (a) use of the shoreline, (b) provision of public access, and (c) advisory review of appearance.

In addition, BCDC is authorized to administer the State's Coastal Zone Management Program in San Francisco Bay, pursuant to the Coastal Zone Management Act of 1972, Section 307(c). This act prohibits the Corps of Engineers from issuing a permit for a project, when such permitting action is within COE jurisdiction, unless the applicant has provided certification that the proposed activity complies with the enforceable, mandatory policies of the State's Coastal Zone Management program, which, in this case, is BCDC's *Bay Plan*.

For purposes of analyzing the environmental impacts of the proposed project, it is assumed that the 2.2-acre area along the southwestern boundary of the site, which has been identified as a

man-made stormwater detention/settling basin facility dug on dry land that floods annually during the rainy season and within which palustrine emergent wetlands have formed, would be exempt from the jurisdiction of the COE. Therefore, this area of BCDC's authority would not be invoked.

U.S. Army Corps of Engineers

Section 404 of the Federal Clean Water Act regulates discharge of fill material into "waters of the United States," including wetlands. Under the Clean Water Act, the U.S. Army Corps of Engineers ("COE") must issue a permit for any project that proposes to fill wetlands of more than one acre. As discussed above, for purposes of analyzing the environmental impacts of the proposed project, it is assumed that the project site is exempt from COE jurisdiction. The COE could make a determination that it has jurisdiction over the 2.2-acre area of the project site along the southwestern boundary that contains a man-made stormwater detention/settling basin, and within which excavated temporarily flooded palustrine emergent wetlands have formed, in which case a permit would be required. A more extensive discussion of the COE's role and responsibilities related to wetlands is provided in Section 4.10 of this EIR.

IMPACTS AND MITIGATION

Significance Criteria

Appendix G of the California Environmental Quality Act ("CEQA") *Guidelines* provides a number of criteria for determining land use impacts. Two of the criteria are potentially applicable to the proposed project. According to Appendix G, a project will normally have a significant impact on the environment if it will:

- conflict with the adopted environmental goals and policies of the community where it is located; or
- conflict with established recreational, educational, religious or scientific uses of an area.

Potential noise impacts of project construction and operation on recreation facilities in the Martin Luther King, Jr. Regional Shoreline are discussed in Section 4.9 of this EIR. Visual quality effects on recreation facilities are discussed in Section 4.3 of the EIR. Construction noise impacts would be temporary and could be reduced to less-than-significant levels with mitigation identified in the EIR. Visual quality effects would be less than significant.

The proposed project would not conflict with the adopted environmental goals and policies of the City of Oakland. The proposed project is consistent with the uses designated for the site in the City's *Comprehensive Plan*. Although the project site is zoned M-40, Heavy Industrial, general retail uses greater than 3,000 square feet are conditionally permitted. As noted in the project description in Section 3 of this EIR, the proposed project would require a Major Conditional Use Permit and would therefore have to conform to the criteria for issuance of the permit contained in the City's Zoning Ordinance.

Project Site

Impact 4.1-1: The proposed project would include dedicated open space within the BCDC 100-foot shoreline zone, thereby providing public access within the shoreline area. Provision of public access would facilitate and enhance public enjoyment of shoreline recreation and scenic resources and is consistent with the goals and policies of the Bay Conservation and Development Commission. (Beneficial)

Development of the project site as proposed would place dedicated open space as well as parking along the northwest boundary of the site. The site plan shows a landscaped pedestrian walkway within a roughly 50-foot band of landscaped open space parallel and adjacent to Damon Slough.

As discussed earlier in this analysis, in order to issue a permit for shoreline alteration, BCDC must determine that the project conforms to the established standards in three areas: (a) use of the shoreline, (b) provision of public access, and (c) advisory review of appearance. With regard to (a), the *Bay Plan* designates areas that should be reserved for priority uses on the shoreline. The project site is not a priority use area.⁶ *Bay Plan* Map No. 4 indicates, however, that the potential exists for a scenic path from the Coliseum Complex along Damon Slough to the Bay. The project as proposed is consistent with this standard in that public access is an integral component of the dedicated open space. The project would create access to the shoreline along Damon Slough through a landscaped walkway extending the length of the northwest boundary of the site. Provision of a publicly accessible landscaped walkway is an improvement over existing conditions. While the public is not currently denied access to the site or to the area adjacent to Damon Slough, it is not an area that is generally open to the public and there is no pathway to facilitate access.

With regard to (b), the McAteer-Petris Act specifies that for areas outside the priority use boundaries, a proposed project must demonstrate that it will provide the maximum feasible public access to the Bay and shoreline that is consistent with the project. Accordingly, the site

plan for a proposed project would need to demonstrate the potential for the project to connect with existing or proposed public access. As stated above, the project would create access to the shoreline where none currently exists, through a landscaped walkway along the length of the northwest boundary of the site. Although this public access has not yet been designed, the project sponsors would conform to applicable requirements, including those requirements that relate to accessibility by the physically handicapped. Relevant design details would be subject to review by BCDC.

With regard to (c), BCDC has appointed a design review board that reviews and makes recommendations to the Commission on the appearance and design of proposed projects. Accordingly, the project sponsors would submit detailed site plans for review by the design review board.

Mitigation Measure 4.1-1: Although no mitigation is required, the project sponsors shall submit site plans to BCDC for review as part of the shoreline alteration permitting process. (Identified in the EIR)

employment. Manufacturing/wholesale trade had 16 percent and retail trade about 12 percent. The "Other" category (including construction, transportation/communication/utilities, finance/insurance/real estate, and government) had 37 percent of all jobs. From 1990 to 1995 (when the Coliseum Shoreline Project is proposed to be completed and operational), the number of jobs in the City is projected to decline by 3 percent. After 1995, the number of jobs is expected to rise again, increasing by a total of 6.4 percent between 1995 and the year 2000. During that period, the greatest increase is projected for the retail industry. ABAG's employment trends from 1990 to 2000 are summarized in Table 4.2.1.⁴

As of March 1994, the unemployment rate for the City of Oakland was 9.3 percent, down from 10.9 percent in February 1994.⁵

TABLE 4.2.1: JOB DISTRIBUTION AND GROWTH IN OAKLAND, 1990, 1995 and 2000

	1990 Employment	Projected 1995 Employment	% Chng. 1990 to 1995	Projected 2000 Employment	% Chng. 1995 to 2000
Manufacturing/ Wholesale Trade	31,170	28,600	-8.2	27,820	-2.7
Retail Trade	22,960	20,350	-11.4	22,560	10.9
Service	70,300	72,420	3.0	77,160	6.5
Other /a/	73,180	70,120	-4.2	76,280	8.8
Total Employment	197,610	191,490	100.0	203,870	6.4

/a/ "Other" category includes Agriculture/Mining, Construction, Transportation/Communications/Utilities, Finance/Insurance/Real Estate, and Government

SOURCE: ABAG, *Recession Update, Projections-92*; Pryde Roberts Carr

Coliseum Area

In 1992, approximately 1,750 firms were located in the Coliseum Area. These firms provide about 20 percent of the City's total employment. There were 31,998 workers in the area,

representing 18 percent of Oakland's total work force and over half of all manufacturing employment. A study by the Coliseum Commerce Center Corporation documented a net job loss of 1,043 in the Coliseum Area from 1989 to 1992, an overall decline of about 4 percent. Table 4.2.2 shows the distribution of employment in the Coliseum Area by industry.⁶ As of March 1994, the unemployment rate for Coliseum Area residents is estimated at 16.9 percent.⁷

TABLE 4.2.2: JOB DISTRIBUTION IN COLISEUM AREA, 1992

	1992 Employment	Percent of Total Employment
Manufacturing/ Wholesale Trade	312	33.8
Retail Trade	1,424	4.5
Service	6,621	20.7
Other /a/	13,136	41.0
Total Employment	31,998	100.0

/a/ "Other" category includes Agriculture/Mining, Construction, Transportation/ Communications/ Utilities, Finance/Insurance/Real Estate, and Government

SOURCE: Coliseum Commerce Center Corporation, *1992 Annual Report*; Pryde Roberts Carr

Housing

The proposed project would not add to Oakland's housing stock. It is primarily an employment-generating project. For this reason, setting information is focused on existing City housing policies and objectives in order to provide a context for assessing potential impacts of the project on housing production policies.

City of Oakland Housing Policies and Objectives

Two housing production policies in the Housing Element of the Oakland Comprehensive Plan are applicable to the Coliseum Shoreline Project:⁸

1. Recognizing that there may be an impact on Oakland's housing needs generated by new local and regional commercial development, the City shall gather relevant data and make it available to all interested parties, and, acting on that data, facilitate the production of new housing to meet the identified needs whenever possible.
2. The City will continue to study the effect of economic growth and job creation on Oakland's housing market, including the demand for market-rate housing as well as for below-market-rate housing. The City will investigate programs which could specifically address this problem as more information becomes available.

IMPACTS AND MITIGATION

Significance Criteria

Appendix G of the CEQA Guidelines specifies that a project will normally have a significant impact on the environment if it will induce substantial growth or concentration of population. Employment impacts are not normally regarded as adverse and are, therefore, not addressed in Appendix G.

Population

No population impacts are expected to result from the project. No increase in population is anticipated because retail projects typically do not import workers. This is due to comparatively low wages and the prevalence of part-time workers in the retail industry. Further, Oakland's unemployment rate is high enough to ensure a sufficient labor pool of retail and warehouse workers for available jobs.

Construction Employment

Impact 4.2-1: The project as proposed would result in the creation of approximately 64 person-years of employment. Adverse environmental impacts that would result from project construction employment are discussed in other sections of the EIR (e. g., Section 4.4, Transportation; Section 4.7, Air Quality; and Section 4.9, Noise). However, the City of Oakland has determined that project construction employment in itself would be a beneficial effect, given existing unemployment and projected declines in jobs in the City through 1995. (Beneficial)

When completed and operational in 1995, the project would contain approximately 250,000 gross square feet (gsf) of floor space, occupied by the following assumed tenant mix:

- A Price-Costco warehouse store as anchor tenant occupying 135,000 gross square feet;
- Two value-oriented outlets (classified as "category stores") occupying approximately 55,000 gsf and 45,000 gsf; and,
- Two general retail tenants occupying stores of 10,000 and 5,000 gsf each.

As shown in Table 4.2.3, based on the square feet of projected occupancy by the different types of retail tenants, estimated total construction cost for the project would be \$13.5 million.⁹ For industrial and commercial developments in the Bay Area, construction payroll expenditures range from 18 to 30 percent of total project costs. For the mix of warehouse and commercial construction required by the proposed project, construction costs are assumed to average 25 percent of total costs.¹⁰ On that basis, the project would create \$3.4 million in construction payroll. In the Oakland Metropolitan Statistical Area (MSA), the average annual payroll cost per full-time equivalent of construction employment is \$52,475, which translates into 64.3 person-years of construction employment generated by the project.¹¹

TABLE 4.2.3: ESTIMATED PROJECT CONSTRUCTION COSTS

	<u>Number of Square Feet</u>	<u>Cost Per Square Foot</u>	<u>Estimated Total Cost (\$ Million)</u>
Price-Costco Warehouse Store	135,000	\$42	\$5.7
Category Stores	100,000	\$64	\$6.4
General Retail Stores	15,000	\$91	\$1.4
TOTAL	250,000	\$54	\$13.5

SOURCE: Pryde Roberts Carr

Mitigation Measure 4.2-1: None Required.

Primary and Secondary Employment

Impact 4.2-2: The project as proposed would result in the creation of 228 primary jobs and 274 secondary jobs. Adverse environmental impacts that would result from the project employment are discussed in other sections of the EIR (e.g. Section 4.4, Transportation; Section 4.7, Air Quality; and Section 4.9, Noise). However, the City of Oakland has determined that growth in primary and secondary employment resulting from the project in itself would be a beneficial effect, given current unemployment and declines in jobs in the City through 1995. (Beneficial)

The project would employ approximately 371 workers when fully operational. Table 4.2.4 projects employment by type of retail occupant.¹²

TABLE 4.2.4: TOTAL PROJECTED EMPLOYMENT

	<u>Number of Square Feet</u>	<u>Employees Per Square Foot</u>	<u>Total No. Employees</u>
Price-Costco Warehouse Store /a/	135,000	0.0013	176
Category Stores /b/	100,000	0.0016	160
General Retail Stores /c/	15,000	0.0023	35
TOTAL	250,000	---	371

/a/ Average 770 square feet per employee

/b/ Average 600 square feet per employee

/c/ Average 450 square feet per employee

SOURCE: Pryde Roberts Carr

As noted in the Project Description, Price-Costco, co-sponsor of the proposed project, has stated its intent to close its existing 110,000-square-foot San Leandro store once the Coliseum Shoreline Price-Costco is open. Closure of the San Leandro Costco store is thus a reasonably

foreseeable indirect effect of the proposed project. For that reason, in estimating net new employment that would result from the proposed project, closure of the San Leandro store is factored into the EIR analysis. The EIR analysis makes the following assumptions:

- there are an estimated 143 current employees in the San Leandro Costco; and
- 75 percent of those employees, or 107 employees, would transfer to the Oakland Price-Costco.

Since total primary employment at the proposed Oakland Price-Costco would be 176 jobs, with the transfer of current employees from the existing San Leandro store, net new employment in the new Price-Costco would total 33 jobs. Thus, total jobs generated by the project would be as follows:

Price-Costco Warehouse Store	33
Category Stores	160
General Retail	<u>35</u>
TOTAL:	228

To estimate secondary employment, a retail multiplier of 2.20 was used. This is a "Type II multiplier," which estimates indirect and induced employment for the nine-county San Francisco Bay region. The Type II multiplier assumes that all new jobs, primary and secondary, remain in the region. Indirect employment consists of those jobs associated with operation of the project, such as contractors, suppliers, and vendors. Induced employment consists of all other employment attributable to the multiplier effect. Each of the 228 direct jobs generated by the project would produce an additional 1.20 jobs, for a total of 274 indirect and induced jobs throughout the region. Total primary and secondary employment generated by the project, then, would be 502 jobs.¹³

Mitigation Measure 4.2-2: None Required.

Housing

No significant housing impacts would result from the project. No in-migration is anticipated. No changes in residence are expected to be attributable to the transferr of Costco employees from its

existing San Leandro store to the Oakland store proposed as part of the project.

Jobs/Housing Balance

In the 1990 Census, the City of Oakland had a jobs-to-housing balance of 1.22, meaning that in that year, Oakland imported roughly one of every five workers from outside the City. By 1995, the ratio of jobs-to-housing is projected to drop to 1.08, with only one out of every 12 to 13 workers imported into Oakland. The 502 new primary and secondary jobs expected to be generated by the project would result in a jobs/housing balance in 1995 of 1.09.¹⁴

NOTES - Population, Employment, and Housing

- 1 U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing, STF3, May 1992.
- 2 Association of Bay Area Governments, *Projections-92, Forecasts for the San Francisco Bay Area to the Year 2010*, July 1992.
- 3 U.S. Bureau of the Census, *supra n. 1*, for census tracts 4061, 4073, 4088, 4089, 4090, 4091, 4092, 4093, 4094 and 4095.
- 4 Association of Bay Area Governments, *Recession Update -- Projections 92*, December 1992.
- 5 Hagaman, Dick, Analyst, California Employment Development Department, telephone communication, May 2, 1994.
- 6 Coliseum Commerce Center Corporation, *1992 Business Retention Program/Survey Results, Annual Report*, January 1993.
- 7 Unemployment rate for the Coliseum subarea is extrapolated from the unemployment rate for the City of Oakland, proportionate to the census tract rates in 1990.
- 8 City of Oakland, *Housing, An Element of the Oakland Comprehensive Plan*, February 1992, p.86.
- 9 Based on an analysis of Los Angeles building permit data for nine types of construction, and factoring in a labor differential of +7.0 percent for the Oakland Area, average construction cost per square foot for warehouse structures is estimated to be \$42; the average for retail stores \$64; for restaurants and other non-office commercial structures \$91. (Pryde Roberts Carr and Glen Elder, "Construction Costs for Building Types, City of Los Angeles (1990)," November 1993.)
- 10 Sweeney, Tom, Secretary-Treasurer, Building and Construction Trades Council, telephone communication, May 17, 1994.
- 11 For general building construction, average weekly wages in January 1994 were \$819.92; the hourly wage was \$22.22, with an average of 36.9 hours worked per week. (California Employment Development Department, *California Labor Market Bulletin, Statistical Supplement*, Table 25, "Average Weekly Earnings, Average Hourly Earnings and Average Weekly Hours in Non-Agricultural Industries, Oakland MSA, 1994).

For the San Francisco Bay Area, an additional 28.01 percent is added to direct labor expenditures to calculate total payroll costs per full-time equivalent of employment. Based on an average weekly wage of \$819.92, direct labor costs for 50 weeks of general construction work would be \$40,996, plus \$11,479 (28 percent) for a total FTE wage of \$52,475. (Roquel, Jim, California Department of Industrial Relations, Division of Labor Statistics and Research, telephone communication, May 3, 1994).

- 12 Employment generators based on 770 square feet per employee for warehouse stores, 600 square feet for category stores, and 450 square feet for general retail stores. Averages computed by Pryde Roberts Carr based on data obtained from October 18, 1992 (1) telephone discussion with Jackie Frank, Real Estate Project Manager, Costco (warehouse store); (2) Dean Schwanke, "Navigating the Value Retail Marketplace," *Urban Land*, May 1993; (3) Cities of Emeryville and Oakland, *East Baybridge Project Final Environmental Impact Report*, October 18, 1991; (4) Gruen Gruen + Associates, *Employment Densities by Type of Workplace*, July 1985; and Pryde Roberts Carr, Analyses for *Promenade Mall Expansion and Redevelopment, Jobs and Housing Study*, for the Los Angeles Community Redevelopment Agency.
- 13 According to ABAG, the employment multiplier for the San Francisco Bay region is 2.20, which means that for every primary job, 1.20 secondary jobs are created. The secondary impact is calculated as: $228 \text{ primary jobs} \times 1.20 = 274 \text{ indirect and induced jobs}$. Total primary and secondary employment is calculated as: $228 + 274 = 502 \text{ jobs}$. (Association of Bay Area Governments, *Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, 1986.)
- 14 According to Census data, the City of Oakland had 197,610 jobs and 162,488 employed residents in 1990. The 1990 jobs-to-housing ratio is calculated: $197,610 \div 162,488 = 1.22$. As of 1995, Oakland is projected to have 191,490 jobs and 176,800 employed residents. The 1995 jobs-to-housing ratio is calculated as: $191,490 \div 176,800 = 1.08$. Primary and secondary employment attributable to the project for 1995 is 816 jobs. When added to the 1995 employment projection, jobs generated by the project will produce a jobs-to-housing ratio of 1.09, calculated as: $191,490 + 816 = 192,306 \div 176,800 = 1.09$.

4.3 VISUAL QUALITY

SETTING

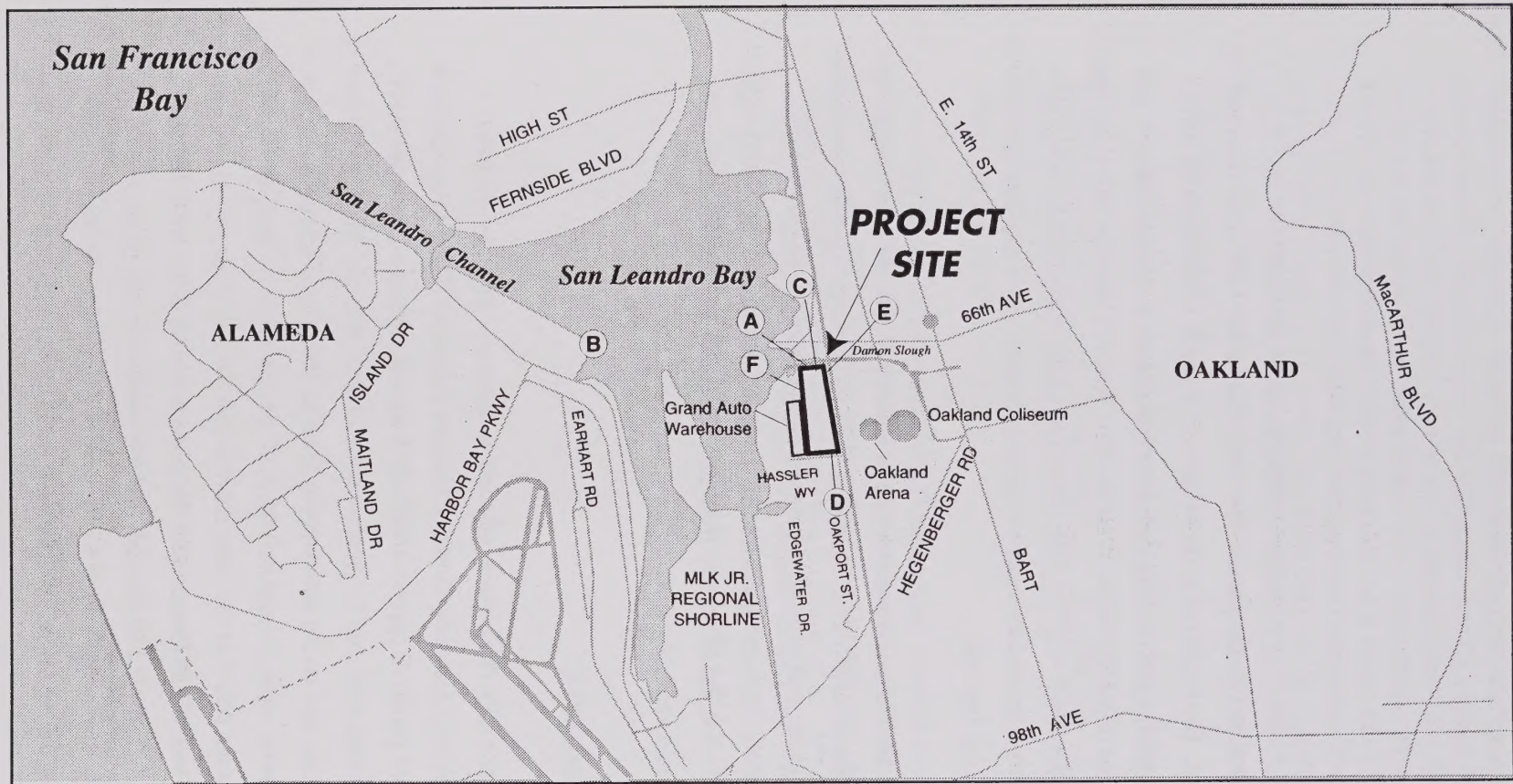
Existing Visual Character

The existing visual character of the project site is determined by the attributes (color, form, texture) of specific site features and by the patterns that the features have assumed as a result of natural and cultural processes. Evaluation of potential project impacts on the existing visual character of the site requires analysis of the type and degree of change in visual attributes and patterns that would result from implementation of the project. Because perceptions of changes in the physical characteristics of a site may differ with respect to issues of importance and value, visual analysis methods may incorporate evaluations of viewer sensitivity as well as measures of the attributes and patterns of site features.

The assessment of the visual attributes and patterns of site features in this analysis is organized according to the following general descriptive categories: site location and spatial organization; landform; surface waters; land use and existing structures; and vegetation. In addition to evaluating the components of the site's existing visual character, the setting section of the visual quality analysis describes the visibility of the site from different viewpoints, and the special sensitivity of views from certain vantage points.

Site Location and Spatial Organization

The project site is located in the City of Oakland, adjacent to Interstate 880 ("I-880") and immediately opposite the Oakland-Alameda County Coliseum complex. The site comprises a roughly rectangular, elongated parcel of approximately 22.6 acres bounded on the northeast by Oakport Street (an I-880 frontage road), on the northwest by Damon Slough, on the southwest by Southern Pacific railroad tracks, and on the southeast by Hassler Way (see Figure 4.3.1). These boundary features do not provide strong visual definition of the site in views from within the site or in views from off-site vantage points at the same elevation in the Bay Plain, except on the southwest. On that side, the wall of the Grand Auto Warehouse establishes a well-defined, visual edge that extends approximately 500 feet; beyond the warehouse, the raised bed of the Southern Pacific spur railroad track continues as a low, partial visual edge. In elevated views of the site from medium-range and long range viewpoints in the East Bay Hills, the features that



No Scale

SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.1
Viewpoint Map

define the rectangular shape of the project site (e.g., Damon Slough, Hassler Way, Oakport Street and I-880) are visible.

Generally flat lands within the City of Oakland surround the project site. To the west of the site are properties owned by the City of Oakland and the Port of Oakland (Martin Luther King Jr. Regional Shoreline), and the open waters of San Leandro Bay. (Although owned by the Port, the Martin Luther King, Jr. Regional Shoreline is leased and operated by the East Bay Regional Park District). Because the site lacks defined visual features on three of its boundaries, it tends to merge visually with the pattern of surrounding urban development in views from within the Bay Plain. That pattern consists of large-scale industrial and commercial structures (e.g., the 12-story UNISYS Airport Corporate Structure across Hassler Way from the project site, the Oakland Coliseum Arena and Union Bank) alternating with open expanses of surface parking or vacant parcels.

In addition to its lack of overall form, the project site is devoid of large-scale landscape or architectural features that, due to their height or distinctive form, would serve as landscape focal points in views throughout the site area. The site itself has been disturbed and altered in appearance over time by development that includes construction of I-880 and subsequent grading and filling.

Landform

Landform substantially determines the overall visual character of the project site and its vicinity. The site is level, with almost no discernible relief. Elevations on the project site range from 4.34 feet to 8.42 feet above sea level.¹ The East Bay Hills are a distant but prominent natural landscape feature visible throughout the project area trending north to south and defining the horizon in easterly views.

Surface Waters

Damon Slough, which comprises the northwest boundary of the project site, is a tidal water body that empties into San Leandro Bay. Damon Slough (west of the Southern Pacific Railroad spur tracks), San Leandro Bay and the surrounding shoreline are part of Martin Luther King, Jr. Regional Shoreline, and are protected as a wildlife sanctuary operated by the East Bay Regional Park District. San Leandro Bay serves as an important scenic resource in the largely urban, industrial environment of adjacent areas of Oakland.

The portion of the slough that borders the project site is tidal. Water in the slough is murky and very slow moving. As the tide recedes, the dark brown/black mud of the slough bed is revealed. The portion of the slough that borders the project site is approximately 30 to 40 feet wide and has retained vegetated, natural-appearing banks (see Figure 4.3.2). Along with a variety of salt-tolerant plant species along its banks that serve as habitat for bird species is a scattering of urban refuse and debris (e.g. paper, plastic, bottles). The slough is a component of the visual open space provided by the waters of San Leandro Bay.² Damon Slough is publicly accessible within Martin Luther King, Jr. Regional Shoreline.

Land Uses and Existing Structures

Various temporary uses occupy the project site from time to time, including Christmas tree sales, pumpkin sales, carnivals, and overflow parking for Coliseum events;³ however, the site is essentially vacant, undeveloped land. Overhead utility lines that run along the southwest and northwest boundaries of the project site and a billboard that faces northbound traffic on I-880 are the only visible permanent site improvements.

Throughout the project site vicinity, landscape features are predominantly industrial and commercial, consisting of office, warehouse or public structures and roads/freeways. The project site is bordered on the southeast by the UNISYS Airport Corporate Center, a 12-story office building that is rectilinear in form, with adjacent landscaped parking lots. The UNISYS building is beige with black reflective windows and is highly visible from viewpoints throughout the Bay Plain (see Figures 4.3.3 and 4.3.4). On the southwest, the project site is adjacent to Southern Pacific Railroad spur tracks that run the length of the project site. On the west side of the railroad tracks is the approximately 25-foot-high Grand Auto West Warehouse, a mustard-yellow rectilinear building with white trim and no architectural ornament or detailing (see Figures 4.3.4 and 4.3.5). To the east, across Oakport Street, is I-880, an eight-lane freeway that is elevated slightly above project site grade.⁴

Directly across I-880 from the project site is the Oakland Coliseum-Arena Complex (see Figure 4.3.1). The Arena is a circular structure rising about 60 feet above grade and surrounded by a landscaped earthen bank. A glass facade is recessed behind "X"-shaped trusses that extend from the base to the roof. In the evening, lighting makes the interior visible from nearby areas, including the project site. The Stadium, directly behind the Arena, is also a circular structure built around a playing field that is about 22 feet below sea level. Approximately 60 feet of the Stadium is above ground-level. It is an exposed concrete structure within a landscaped earthen

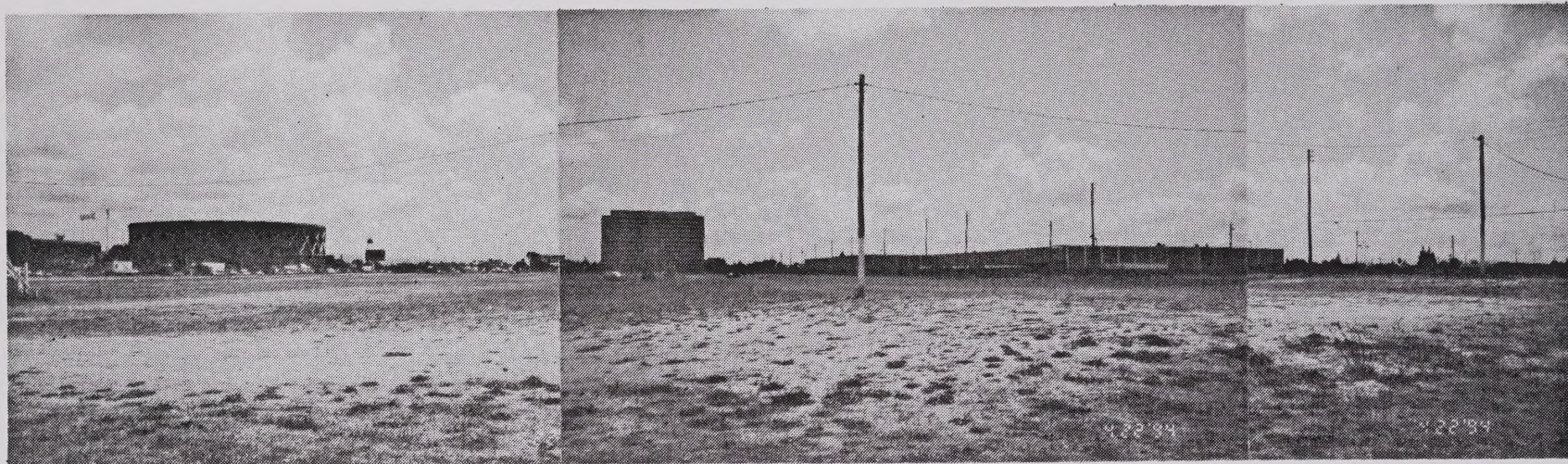


SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.2

Viewpoint A: Looking onto Bank of Damon Slough
Northeastern Boundary of Project Site

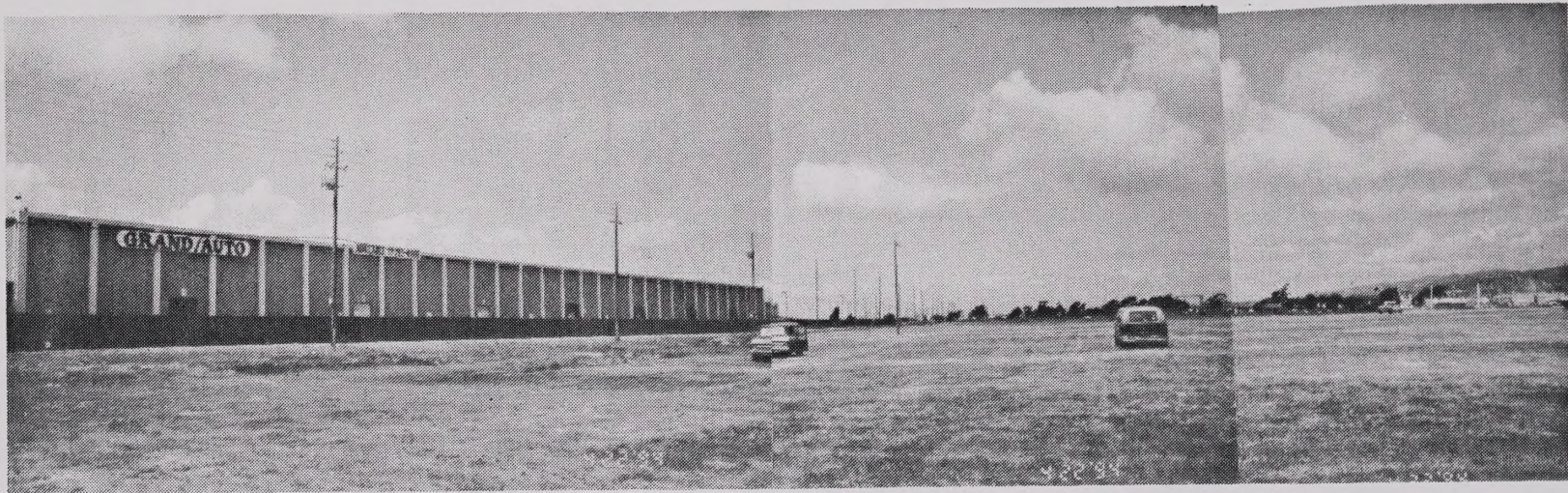


SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.3

Viewpoint B: View from Model Airplane Field,
Bay Farm Island, Alameda

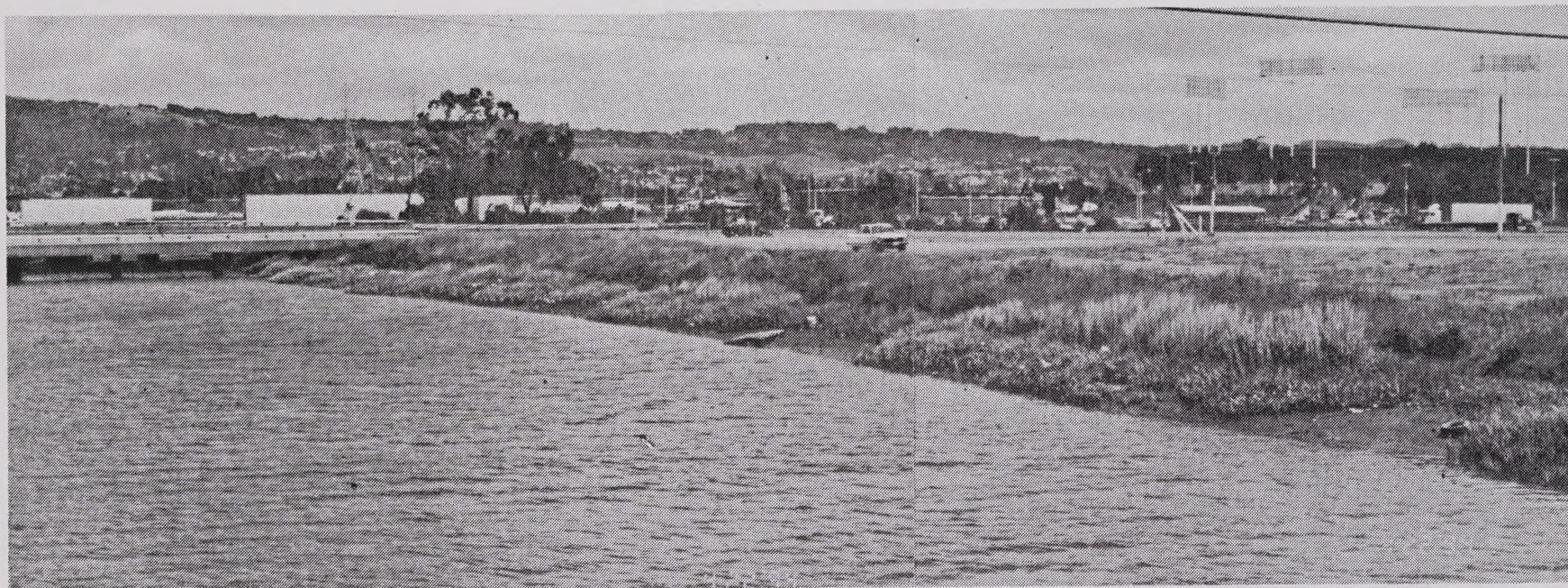


SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.4

Viewpoint C: Looking Southwesterly from
Northeastern Boundary of Project Site



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.5

Viewpoint D: Looking Northeasterly from the
Southwestern Boundary of the Project

bank surrounded by six large lighting standards that are used during nighttime events (e.g., Oakland Athletics baseball games).

Vegetation

The majority of the project site is covered with non-native annual grasses, other ground-cover species, and shrubs that range from light tan to medium green in color, depending on the season. Although many of these plants are perennial, they wither and die back due to lack of water from late spring to late fall.

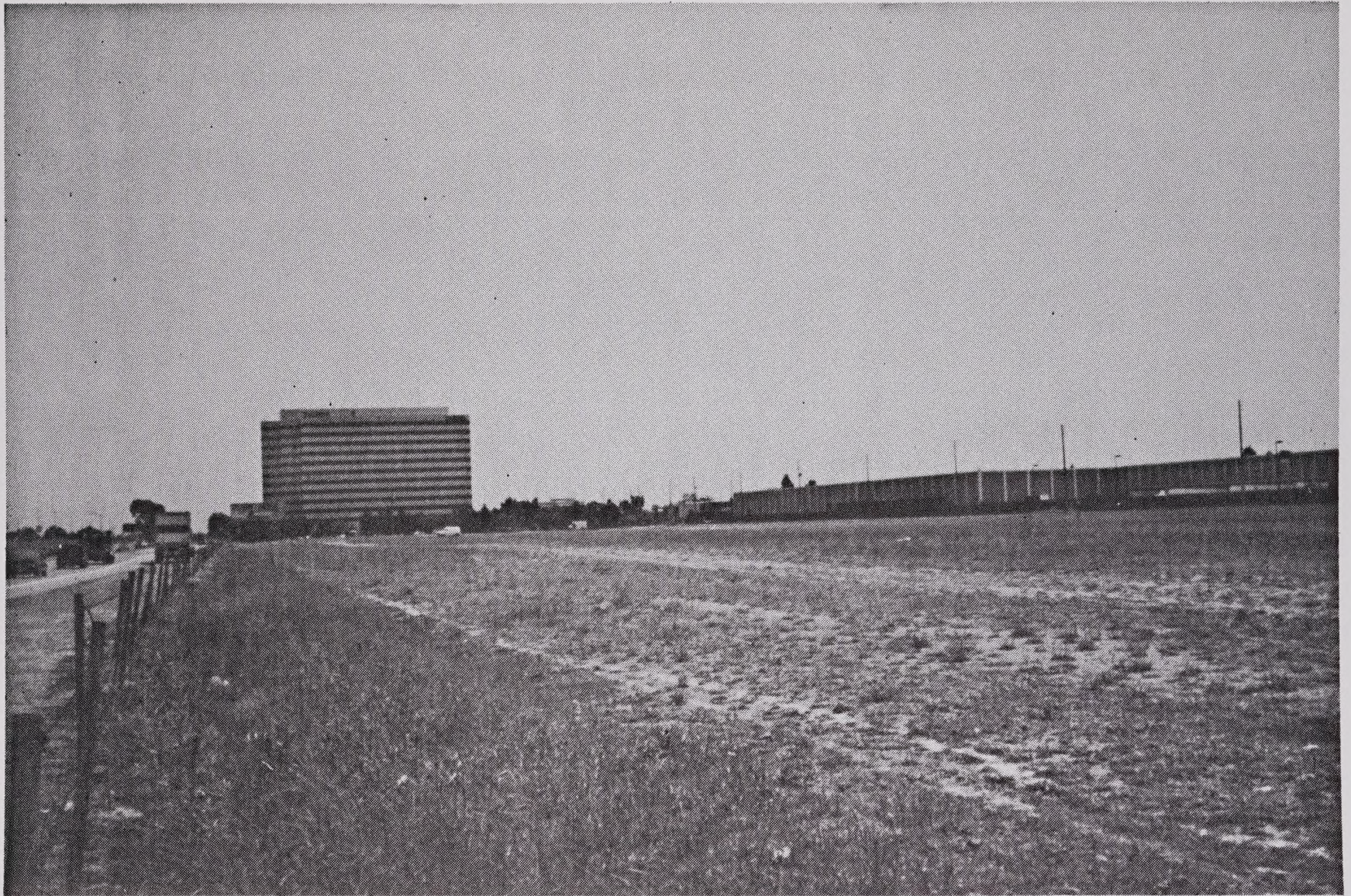
Views of and from the Project Site

Short-Range Viewpoints

Short-range views of the project site (views from vantage points closer than one mile to the site) are available both from fixed vantage points and in dynamic view sequences along adjoining roadways. Sixty-sixth Avenue, Hassler Way, Interstate 880, and Oakport Street provide view sequences of the project site from the north, south and east, respectively, at posted speed limits of 15 to 55 miles per hour (mph) (see Figure 4.3.6). However, views from I-880 south of the project site are blocked by the existing UNISYS office building. Both Hassler Way and Oakport Street are two-lane roads that border the project site and provide northerly and westerly-looking views. Sixty-sixth Avenue (four lanes) and I-880 (eight lanes) provide slightly elevated views of the project site. Short-range view sequences are disrupted by barbed wire fences, overhead utility lines, and signage in the foreground and middleground (depending on the angle).

The Oakland Coliseum Arena, directly east from the project site across I-880, provides both fixed ground-level and elevated views of the project site. Ground-level views (from the parking lots) are somewhat obstructed as traffic from I-880 passes through the view corridor. However, elevated views from the Coliseum Arena afford clear views of the entire project site. Martin Luther King Jr. Regional Shoreline, bordering the project site on the north, provides fixed short-range views of the project site from a number of vantage points along its eastern shoreline, especially Damon Slough.

Westerly-looking views across the project site from I-880, Oakport Street and the Oakland Arena terminate in the east wall of the Grand Auto West Warehouse, blocking longer range views of the horizon.



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.6

Viewpoint E: View from Oakport Street

Short-range views from the project site are dominated by nearby large-scale structures that include the buildings of the Coliseum Complex, the 66th Avenue/I-880 interchange, the blank facade of the Grand Auto West Warehouse, and the UNISYS office tower. At its northwestern end, the site affords close and detailed views of the waters of Damon Slough and the vegetation growing in its channel, and also of a portion of the Martin Luther King, Jr. Regional Shoreline.

Medium-Range Viewpoints

Medium-range views of the project site (views from vantage points one to two miles distant from the site) are available from points located in the Cities of Oakland and Alameda. Figure 4.3.3 illustrates a typical medium-range view of the project site from Alameda. Because of the relatively flat topography of the Bay Plain, existing buildings and other structures generally block ground-level, medium-range views of the project site from points to the east. View sequences of the project site are available from elevated BART trains between the Fruitvale and Coliseum stations and other elevated structures (e.g., overpasses) within the Bay Plain. However, these view sequences are partially obstructed by utility lines, signage, trees, and buildings within the view corridor.

Medium-range views from the project site are partially obstructed on three sides by the Grand Auto West Warehouse, the UNISYS building, and the I-880 roadway. However, to the northwest, views open out from the site to include waters of San Leandro Bay and the shoreline of the City of Alameda.

Long-Range Viewpoints

Long-range viewpoints of the project site area (views from vantage points more than two miles distant from the site) are available from points throughout the East Bay Hills located northeast of the project site. Due to intervening structures, the surface of the project site cannot be seen from these viewpoints. However, the two structures that border the project site to the south and west, the UNISYS office building and Grand Auto West Warehouse, respectively, are visible from vantage points in the East Bay Hills. The UNISYS office building in particular serves as a visual landmark within the Bay Plain because of its height relative to most other structures in the vicinity.

Due to its location in the Bay Plain and the general lack of visual edges, the project site itself affords panoramic long-range views of regional landscape features and landmarks that include

San Bruno Mountain, the office towers of downtown San Francisco and downtown Oakland, Twin Peaks, and the East Bay Hills. The quality of long-range panoramic views from the project site is influenced by atmospheric conditions.

Viewer Sensitivity

The northeastern boundary of the project site is within 200 feet of a portion of Martin Luther King, Jr. Regional Shoreline. Park users currently have panoramic long-range views of the East Bay Hills and short-range views of the Coliseum Complex across the project site (see Figure 4.3.7).

Applicable Plans and Policies

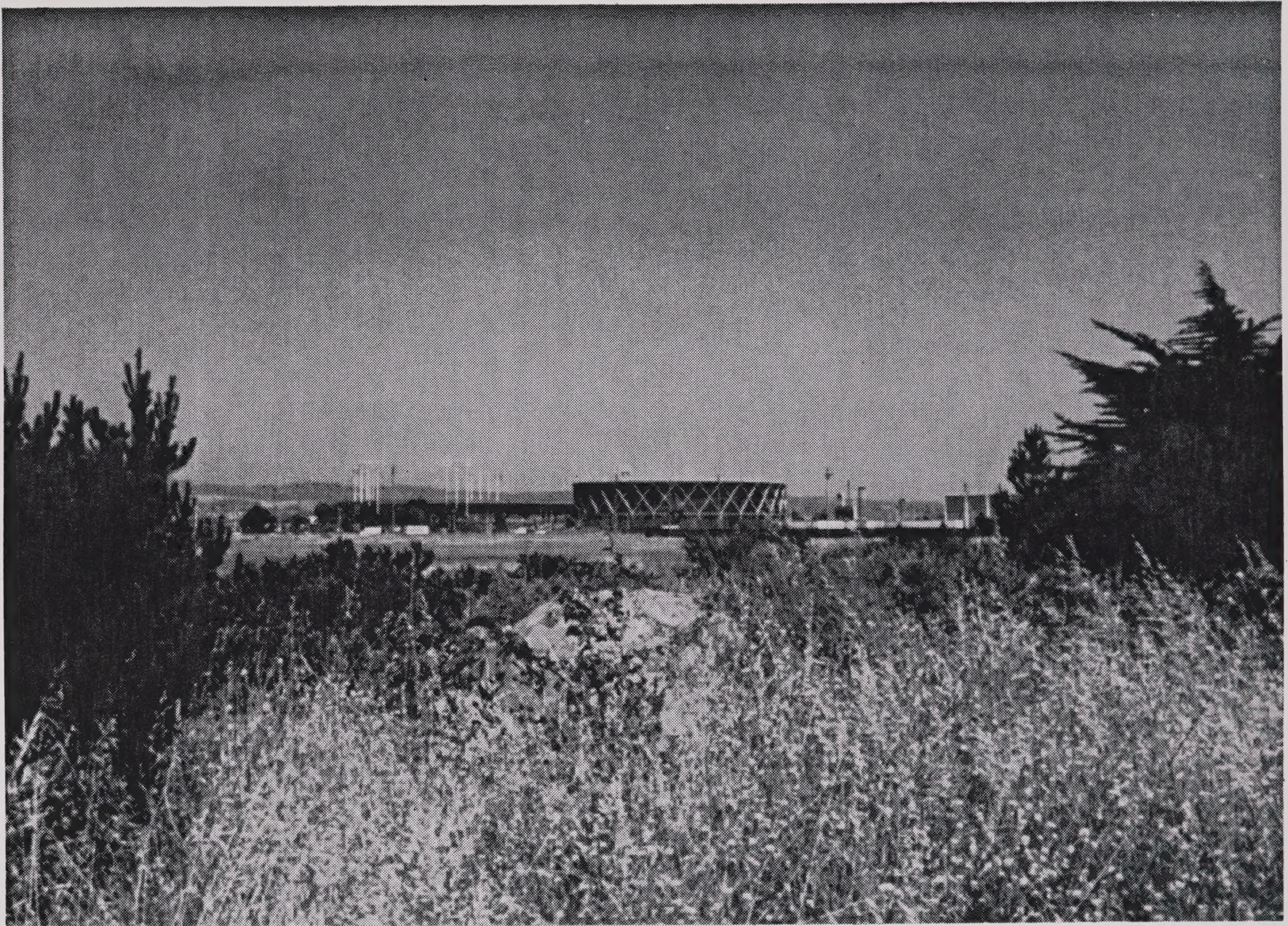
The proposed project is located on land entirely within the City of Oakland. Thus, any on-site development is subject to the applicable plans and policies of the City.

City of Oakland

The City of Oakland's Policy Plan, a component of its Oakland *Comprehensive Plan*, contains the following visual resource policies:

Commercial and Industrial Land Uses

- The environmental quality of Oakland's commercial and industrial areas should be protected and in many cases greatly improved. Amenities such as street trees and plazas should be added where appropriate to make these areas more desirable shopping or working environments.(58889)
- Commercial and industrial buildings, signs, and other facilities should be designed to harmonize with, or where appropriate enhance, their surroundings. (58889)
- Development in commercial and industrial areas should be limited in intensity, or limited to low-rise construction, where and to the extent this is appropriate to...protect the area's desired character where that depends significantly on moderate or consistent building scale or appearance, or on openness of development... (58889)



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.7

Viewpoint F: View from
Martin Luther King, Jr. Regional Shoreline

Since the proposed project is adjacent to Damon Slough and Martin Luther King, Jr. Regional Shoreline, both designated as open space areas by the City of Oakland, the following Open Space and Natural Resources policies of the Oakland Policy Plan are relevant:

Open Space and Natural Resources

- Urban development wherever it occurs should be related sensitively to the natural setting with the scale and intensity of development in each case bearing a reasonable relationship to the physical characteristics of the site. (55937)

Plant and Animal Resources

- Where new development occurs, examples of native vegetation should be retained and, where feasible, large sections should be left undisturbed for ecological, educational, and *aesthetic* benefit... (emphasis added) (55637)

IMPACTS AND MITIGATIONS

Changes in Visual Character that would result from the Proposed Project

Site Location and Spatial Organization

Proposed development at the project site would not adversely affect site location or spatial organization. The development of commercial facilities would change the overall appearance of the site but the existing rectilinear spatial organization of the site would be preserved.

Landscaping trees to be planted along the perimeter of the project site could enhance the definition of site edges and the perception of overall form in short-range and medium-range views from throughout the project area.

Landform

Development of the proposed project would require some grading for construction of new buildings, parking lots or connections to public utility services. However, any changes in topography would occur only during the construction phase of the project and would not permanently alter landform appearance.

Surface Waters

Construction of the proposed project would preserve and enhance views of principal existing surface water features visible from the project site (e.g. Damon Slough). The preliminary landscape schedule indicates that various species of shade trees and accent trees would be planted on both sides of a newly created walkway along the upper banks of Damon Slough.⁵

Land Uses and Existing Structures

The proposed project would change the existing land use from undeveloped and vacant to commercial by adding approximately 250,000 square feet of retail space and 1,296 parking spaces. Of the 250,000 square feet, 135,000 square feet is planned for the Price-Costco commercial development on the southwest portion of the lot. Site plans made available by the project sponsors show that the building would be located in the southwest corner of the project site. It would be roughly rectangular in shape (314 ft by 366 ft) with a small square addition (110 ft by 120 ft) attached to the southwest corner.⁶ Elevations indicate that the proposed building would range from 32 to 37 feet in height. On the northwest portion (Parcel B) would be four smaller commercial structures of approximately 54,000, 45,000, 9,600, and 5,400 square feet each (see Figure 3.3). These structures would be limited in height to 35 feet. The scale of larger project structures would be similar to that of existing commercial buildings in the project site area (e.g. Grand Auto Warehouse).

Vegetation

Existing annual grass species, other ground-covers, and shrubs covering the majority of the project site would be removed and replaced with impervious surfaces. Riparian vegetation along the lower banks of Damon Slough would be preserved. In addition, landscape elements including shade trees, accent trees, evergreen trees, shrubs, and groundcover would be planted along the edge of the entire site and within the parking areas as designated in the preliminary landscape schedule.⁷

Changes in Views that would result from the Proposed Project

Short-Range Viewpoints

Construction of the proposed project would alter existing short-range views from publicly accessible viewpoints. Specifically, project structures and landscaping could be seen from Damon Slough, San Leandro Bay and shoreline, Coliseum Complex, I-880 and all adjacent roads (see Figure 4.3.8). In addition, views of San Leandro Bay would be partially obstructed from some on-site viewpoints at the north end of the site.

Medium-Range Viewpoints

Views from elevated BART trains and other elevated structures would be slightly altered. Proposed project structures would be, at maximum, approximately seven to twelve feet above the parapet of the existing Grand Auto West Warehouse. This would not be a substantial change in the context of existing urban development, especially in relation to the 12-story UNISYS office building immediately south of the project site. Views of San Leandro Bay and the Alameda Shoreline would be partially obstructed by project structures and landscaping.

Long-Range Viewpoints

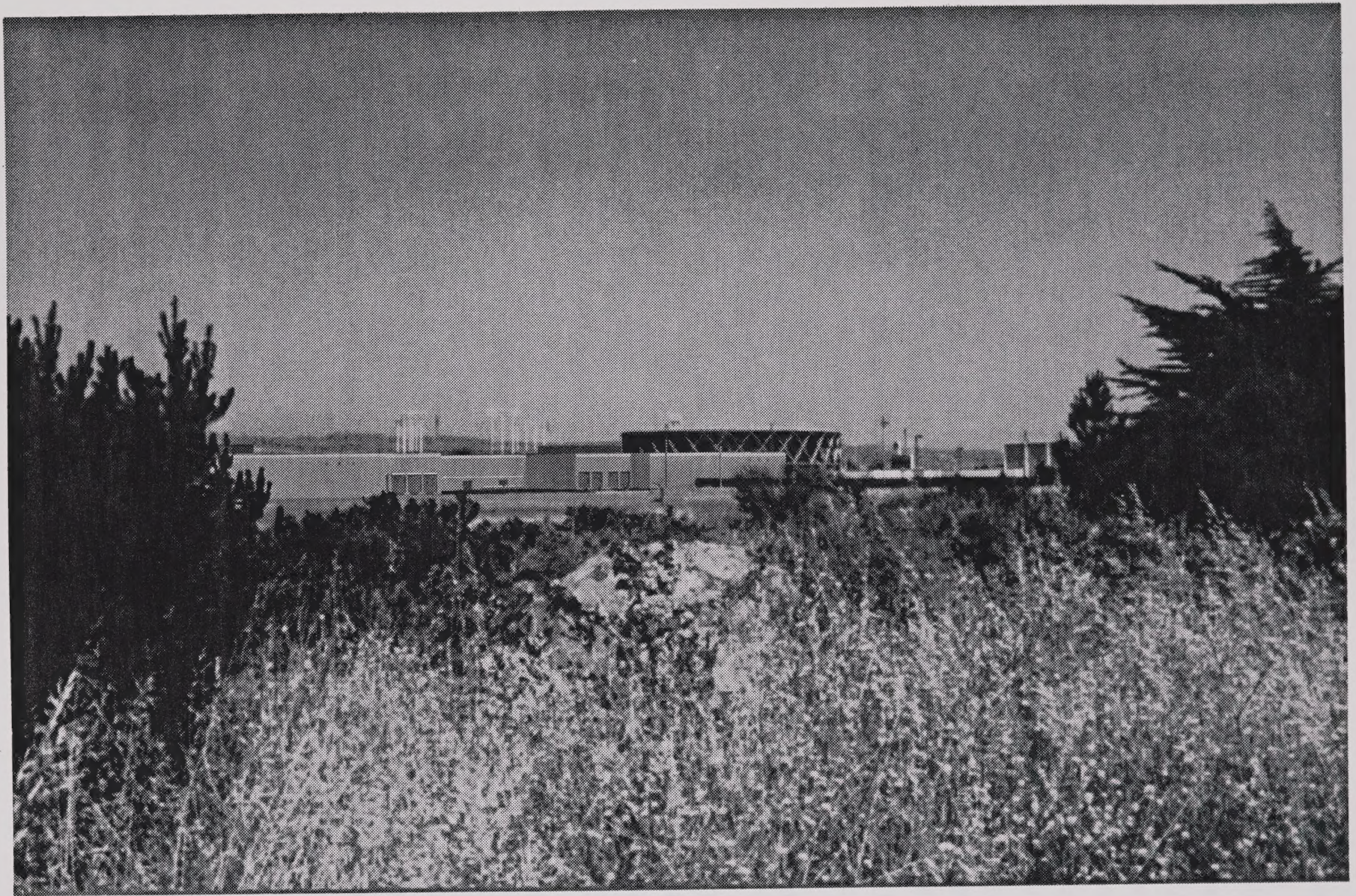
From long-range, publicly accessible viewpoints, proposed project structures, surface parking, and landscaping would be visible but not visually prominent. Assuming that design, color, texture, and height of project structures would be compatible with existing buildings, the proposed project would tend to merge visually with the surrounding urbanized area. There would be no view obstruction of the San Francisco Bay or San Bruno Mountains in long-range views across the project site. From within the project site, at some locations existing panoramic views of regional landmarks would be obstructed by project structures and landscaping.

Viewer Sensitivity

From public viewpoints, within the Martin Luther King, Jr. Regional Shoreline, proposed project structures, surface parking, and landscaping would be visible. Views of the project from shoreline public recreation facilities would encompass loading and freight areas at the backs of buildings. Trucks and loading and storage facilities would thus be visible to recreation users of the shoreline park (see Figure 4.3.9).



SOURCE: Costco



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.3.9

Visual Simulation Showing
Proposed Buildings A, B and C

Significance Criteria

The California Environmental Quality Act ("CEQA") *Guidelines* state that scenic quality is part of the resource base. According to the CEQA *Guidelines*, significant effects on the environment include substantial or potentially substantial adverse changes in objects having aesthetic significance, and substantial or potentially substantial, demonstrable negative aesthetic effects. Guidance in identifying adverse and potentially significant aesthetic effects according to CEQA is provided in several sections of the *Guidelines*. Appendix G and Appendix I of the CEQA *Guidelines* contain criteria for identifying aesthetic impacts: obstruction of a scenic vista or view open to the public; creation of an aesthetically offensive site open to public view; degradation of an object having historic or aesthetic significance; division or disruption of the physical arrangement of an established community; production of new light and glare; and conflict with adopted environmental plans and goals of the community where the project would be located. The criteria applicable to the proposed project are discussed below.

View Obstruction

Views from or of a project site may be physically blocked, reduced, or reconfigured by elements of a proposed project. View sequences of a project site or of a site feature, such as views from a vehicle traveling along a roadway or from a pedestrian path, may be shortened or interrupted by a proposed development.

Impairment of Visual Resources

Impairment of the quality of important public views may result from the introduction into an existing view of a visual feature that is "aesthetically offensive" in itself, or from the degradation of an existing visual feature that has aesthetic significance, or from the introduction into an existing view of objects or patterns that exhibit a relatively high degree of visual contrast with the existing objects and patterns on the site. Physical changes that may impair the quality of important public views include changes in the scale, form, color and texture of natural and cultural visual features existing on the site. Such changes could result from new land uses, new structures, grading and excavation, elimination of existing vegetation, changes in the alignment or area of surface waters, or landscaping.

Conflict with Adopted Environmental Plans or Goals

A project may result in changes in visual character and/or existing views that conflict with the adopted environmental plans or goals of the community in which the project is proposed. For example, a project may remove visually distinctive landscape elements that are protected in adopted plans and policies (e.g., certain species of trees, rock formations and outcrops) or may include visually intrusive features or uses that are prohibited or restricted (e.g., sources of light and glare, novel building forms and/or materials).

Light and Glare

New or additional glare may result from a project development due to use of reflective exterior materials and finishes in construction, including bright or reflective paints, glass and metal surfaces. Light impacts could occur from the nighttime illumination of a project site or facility, or from lights on automobiles or vehicles associated with the project.

Impact 4.3-1: Development of the proposed project would partially obstruct scenic views from vantage points in the immediate vicinity of the project site, as well as from the site itself. (Less than Significant)

View sequences from Oakport Street and I-880 south of Damon Slough and north of the UNISYS office building, across the project site in a northwesterly direction towards San Leandro Bay, could be momentarily blocked by proposed project structures and landscaping. However, existing ground-level, view sequences have generally low scenic quality due to viewer movement and also fragmentation of views caused by existing overhead utility lines and barbed wire fences. In easterly-looking views across the project site from Martin Luther King Jr. Regional Shoreline, the East Bay Hills in the background would be partially obstructed by project buildings (see Figure 4.3.9). To a lesser extent, project buildings would partially obstruct long-range views of the East Bay Hills and the Coliseum and the Arena from the eastern shore of Bay Farm Island and the southern shore of Alameda Island. However, in the existing urbanized environment, these views are of low to moderate visual quality, and the areas of the horizontal and vertical fields of view blocked by project buildings would be limited. View obstruction in all cases would not be a less-than-significant impact. In addition, views of San Leandro Bay from the Oakland Arena and I-880 north of Damon Slough would remain unchanged.

Mitigation Measure 4.3-1: None required.

Impact 4.3-2: The development of the proposed project would introduce new sources of light and glare onto the project site. (Less than Significant)

The increase in traffic to and from the project site, and the construction of new buildings on-site, would introduce additional sources of reflected sunlight and glare to the project site vicinity from windows, automobiles, and other reflective surfaces. Sources of night lighting from the project would include automobile headlights, exterior and interior lighting, and parking lot lighting. However, due to surrounding urbanized land uses that already emit substantial light and glare in the project vicinity (especially the Coliseum Complex and I-880), the increase resulting from the project would not be substantial. No residences would experience close-range lighting or glare effects from the project.

Mitigation Measure 4.3-2: Although this is not a significant impact, the effects of light and glare shall be minimized by the project sponsors through design and landscaping techniques. (Proposed as part of the Project and Identified in the EIR)

The project sponsors have included in their preliminary site plans measures to reduce the effects of light and glare, including creating building setbacks of 60 to 250 feet from the northeastern boundary (adjacent to Oakport Street and I-880), and planting shade trees, accent trees, and evergreen trees along the perimeter of the project site as well as along buildings and parking areas.

In addition, the project sponsors shall ensure that:

- all exterior lighting shall be directed downward;
- parking lot standards shall be no higher than the roofline of the proposed buildings; and
- flood lights, highly reflective surface materials and/or finishes shall not be used in the project design.

The City of Oakland's Office of Building and Planning shall review all project plans and designs to ensure compliance with this measure.

Impact 4.3-2 Level of Significance after Mitigation: Less than Significant.

Impact 4.3-3: Development of the proposed project could impair the visual character of the existing site and its vicinity. (Less than Significant)

The proposed project would alter the visual character of the existing site by constructing five structures on previously undeveloped land. Project structures and other facilities (e.g., surface

parking lots) that were incompatible in form, color, texture or scale with existing buildings and open space areas in the vicinity of the project site could result in visual intrusion. However, given the predominantly industrial and commercial character of the surrounding land uses and the generally low quality of scenic resources in the vicinity of the existing site, impairment of existing visual character of the site would not be substantial. Visual impairment could occur at public viewpoints west of the project site in the Martin Luther King, Jr. Regional Shoreline. Figure 4.3.9 illustrates potential impairment resulting from the presence of loading docks and other functional building features in views from the shoreline park. However, the visual simulation does not show the trees and other landscape features proposed by the developer that would partially mitigate this impairment. This would be a less-than-significant impact.

Mitigation Measure 4.3-3: Although this is not a significant impact, the project sponsors shall incorporate measures into the design of the project to avoid or reduce visual impairment of public views. (Proposed as part of the Project and Identified in the EIR)

The project sponsors have included in their preliminary site plans measures to avoid or limit visual intrusion and aesthetically offensive elements, including limiting the height of new buildings to 37 feet, and planting shade trees, accent trees, and evergreen trees along the perimeter of the project site to shield views.

In addition, the project sponsors shall ensure that color and texture of building materials used would be appropriate in relation to the surrounding urbanized land uses and open space. Building facades finishes should include the use of earth tones (e.g., sand, light grays, browns) and fine to medium surface textures to reduce visual intrusion by new structures. Exterior detailing, functional and ornamental, should be visually discrete (e.g., any window reveals should be small in scale and discrete in color and material). Functional areas and facilities (e.g., loading docks, storage) visible from public viewpoints shall be screened with landscaping that is limited in height to avoid obstruction of scenic resources in the background (e.g., the East Bay Hills, San Leandro Bay).

The City of Oakland's Office of Building and Planning shall review all project plans and designs to ensure compliance with this measure.

Impact 4.3-3 Level of Significance after Mitigation: Less than Significant.

Impact 4.3-4 (Cumulative): The proposed project, in conjunction with existing and future development, would contribute to a cumulative loss of visual open space in the San Leandro Bay shoreline area. (Less than Significant)

When taken in consideration with existing and future development in the Bay Plain, the proposed project would increase the area of developed uses in the project vicinity, diminishing existing visual open space and natural appearing areas. Although vacant, the project site does not have natural scenic resource value, and it is surrounded by urban uses (buildings, roadways, railroad tracks). Except at the north end of the site, adjacent to Damon Slough, the site is not connected visually to important open space areas; where it borders the site, the slough is channelized, lowering its value as open space and as a natural landscape feature. This would be a less-than-significant impact.

Mitigation Measure 4.3-4: None required.

NOTES - Visual Quality

- 1 See Figure C.2.
- 2 Chinn, Lily, site visit, 22 April 1994.
- 3 Huntsman, Scott R., Senior Project Manager, Woodward-Clyde Consultants, letter to Julie Carver, City of Oakland Environmental Affairs Division, entitled "Preliminary Geotechnical Investigation Oakport Street Property, Oakland, California," 22 June 1993; *ibid.*
- 4 Chinn, *supra* n.2.
- 5 Alameda County, *Scenic Route Element*, Alameda County General Plan, May 1966.
- 6 See Figure 3.3 for specific site plan.
- 7 See preliminary landscape schedule in Appendix C for specific plant species that may be used on-site.

4.4 TRAFFIC, TRANSPORTATION, CIRCULATION AND PARKING

SETTING

Study Area

This section provides a description of existing transportation conditions in the vicinity of the project. The project site is located in the City of Oakland, adjacent to Interstate 880 and immediately opposite the Oakland-Alameda County Coliseum-Arena complex. The site is located on the south-west parcel adjacent to the interchange of I-880 at 66th Avenue. The local streets immediately serving the site are Oakport Street and Hassler Way. When the City initiated consideration of a Coliseum Shoreline Project, it acknowledged that the site was readily accessible from and to the I-880 freeway off- and on-ramps at 66th Avenue. Data collected and maintained by the City indicate that trip distribution and trip patterns for the project vicinity would be focused on the 66th Avenue freeway interchange. Also, because of the alignment of the freeway in this segment of the East Bay, and the configuration of the next closest intersections, at High Street and at Hegenberger Road, very little project-related traffic would be expected to use these other locations; this EIR thus considers freeway access to the site via 66th Avenue only. The City believes these are acceptable assumptions. However, the use of these assumptions results in "worst case" analysis of project traffic impacts on the 66th Avenue interchange by adding all project trips to the already substantial traffic volumes bound for the Coliseum and Arena, in particular during the weekend noon peak hour. Although not analyzed in this EIR, project circulation impacts under average conditions would be reduced in magnitude.

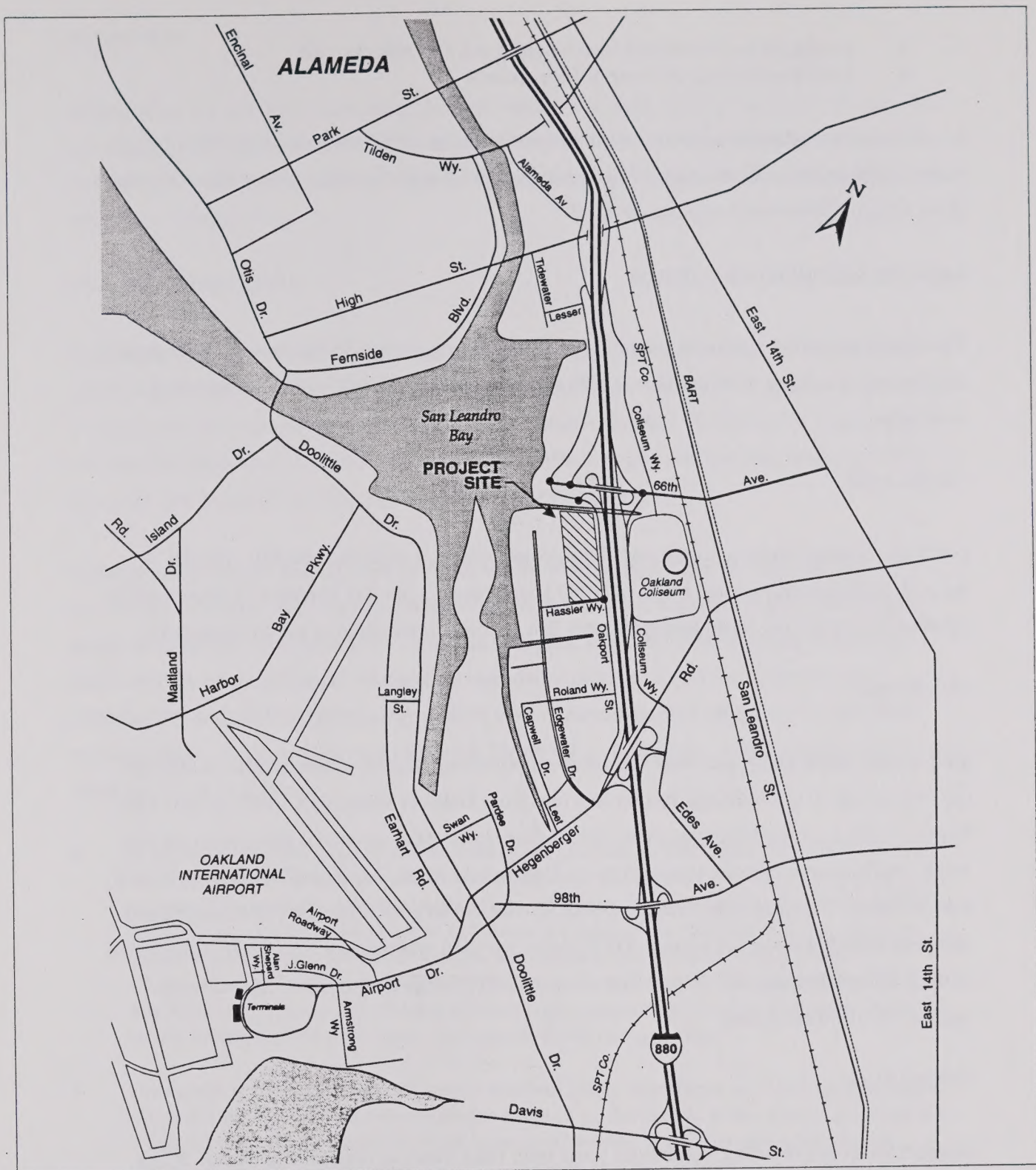
The five study intersections and four ramps analyzed in this study are listed below; general locations are indicated on Figure 4.4.1.

Study Intersections:

- Oakport Street at Hassler Way
- Southbound on-ramp at Oakport Street
- Oakport Street at 66th Avenue
- I-880 Southbound off-ramp at 66th Avenue
- I-880 Northbound ramps at 66th Avenue

Study Ramps:

- I-880 Southbound on-ramp at Oakport Street
- I-880 Southbound off-ramp at 66th Avenue



● Study Intersection

SOURCE: Kolve Engineering

Coliseum Shoreline / 930397 ■

Figure 4.4.1
Study Area

- Eastbound to Northbound loop on-ramp at I-880/66th Avenue
- I-880 Northbound off-ramp at 66th Avenue

In addition, the evaluation addresses weaving conditions on I-880 between the Northbound on-ramps at Hegenberger Road and the Northbound off-ramp at 66th Avenue. Roadway conditions along Oakport Street have also been studied.

Local and Regional Roadway System

The following provides a discussion of the existing roadway system in the vicinity of the project site, including number of travel lanes, traffic flow directions, sidewalk widths, and parking limitations.

Interstate 880

I-880 (the Nimitz Freeway) to the east of the project site is an eight-lane facility. For the purpose of this study, regional travel on I-880 bound towards the Bay Bridge is characterized as northbound traffic, and travel bound towards San Jose is characterized as southbound traffic.

66th Avenue

66th Avenue is the major east-west arterial street providing primary access between I-880 and the project site. It is a four-lane facility that runs from Oakport Street, over I-880, to East 14th Street. Parking is prohibited along both sides of the street. 66th Avenue is also one of the two major arterials serving traffic to and from the Oakland-Alameda Coliseum Complex on the east side of I-880. The study intersections of 66th Avenue at Oakport Street and I-880 southbound off-ramp at 66th Avenue are all-way STOP-sign controlled intersections. The study intersection of the I-880 northbound off-ramp at 66th Avenue is STOP-sign controlled on the off-ramp approach to the intersection.

Oakport Street

Oakport Street is a two-lane, continuous route from High Street to Hegenberger Road. It lies west of, and parallel to, I-880, and runs along the northeastern boundary of the project site. Oakport Street forms a T-intersection with 66th Avenue. Oakport also leads to the I-880 southbound on-ramp south of 66th Avenue. Further south, near the project site, Oakport crosses Damon Slough via a two-lane bridge.

Hassler Way

Hassler Way is a two-lane street along the southeastern boundary of the project site. It provides a connection between Oakport Street and Edgewater Drive. The eastbound lane is 18 feet in width, which facilitates unrestricted right-turn movements onto Oakport Street. No parking is allowed on Hassler Way.

Existing Coliseum Traffic

The project site lies opposite the Oakland-Alameda County Coliseum-Arena complex on the east side of I-880. Existing traffic volumes were counted at study locations and ramps in November 1993, on days when no events took place at the Coliseum Complex. Weekday PM peak traffic was counted between 4 and 6 PM. Weekend peak traffic was counted between noon and 2 PM. The peak one-hour traffic volume counts are shown on Figure 4.4.2.

Coliseum event traffic was obtained from the traffic analysis conducted by Korve Engineering, Inc. for the December 1993 *Oakland-Alameda County Coliseum Expansion EIR*. During sports and entertainment events held at the Coliseum Complex, significant traffic surges impact the study area. Average historical "worst case" attendance levels at sports events during the weekday PM and weekend noon study periods were determined and added to the background existing traffic. These volumes are shown on Figure 4.4.3. A description of attendance during these periods is as follows:

- A weekday baseball game in the stadium could generate an attendance of 17,300 people, and a concurrent basketball game in the arena could generate an attendance of 15,000 people. This scenario, which would only occur during the schedule overlap in April (2-9 days a year), represents the highest combined weekday night attendance levels likely to occur. Given a mode split of 27 percent auto drivers, this scenario would produce 17,440 Average Daily Trips (ADT). Typical events start at 7:05 PM. About 15 percent of this ADT (or 30 percent of all total inbound trips) would be arriving at Coliseum sports events during the PM peak hour. This equals 2,616 inbound trips.
- During the weekend day, a peak season baseball game (attendance = 35,000 people) may occur in conjunction with a medium-size event (e.g., the circus) at the Arena (attendance = 5,300 people). (Peak season baseball is never scheduled to overlap with a basketball game). A typical baseball game would commence at 1 PM. During the noon peak (12-1 PM), 35 percent of the ADT (or 70 percent of inbound trips) would be arriving at the Coliseum. Given an ADT of 21,760, event traffic during this study period would be 7,616 inbound trips.

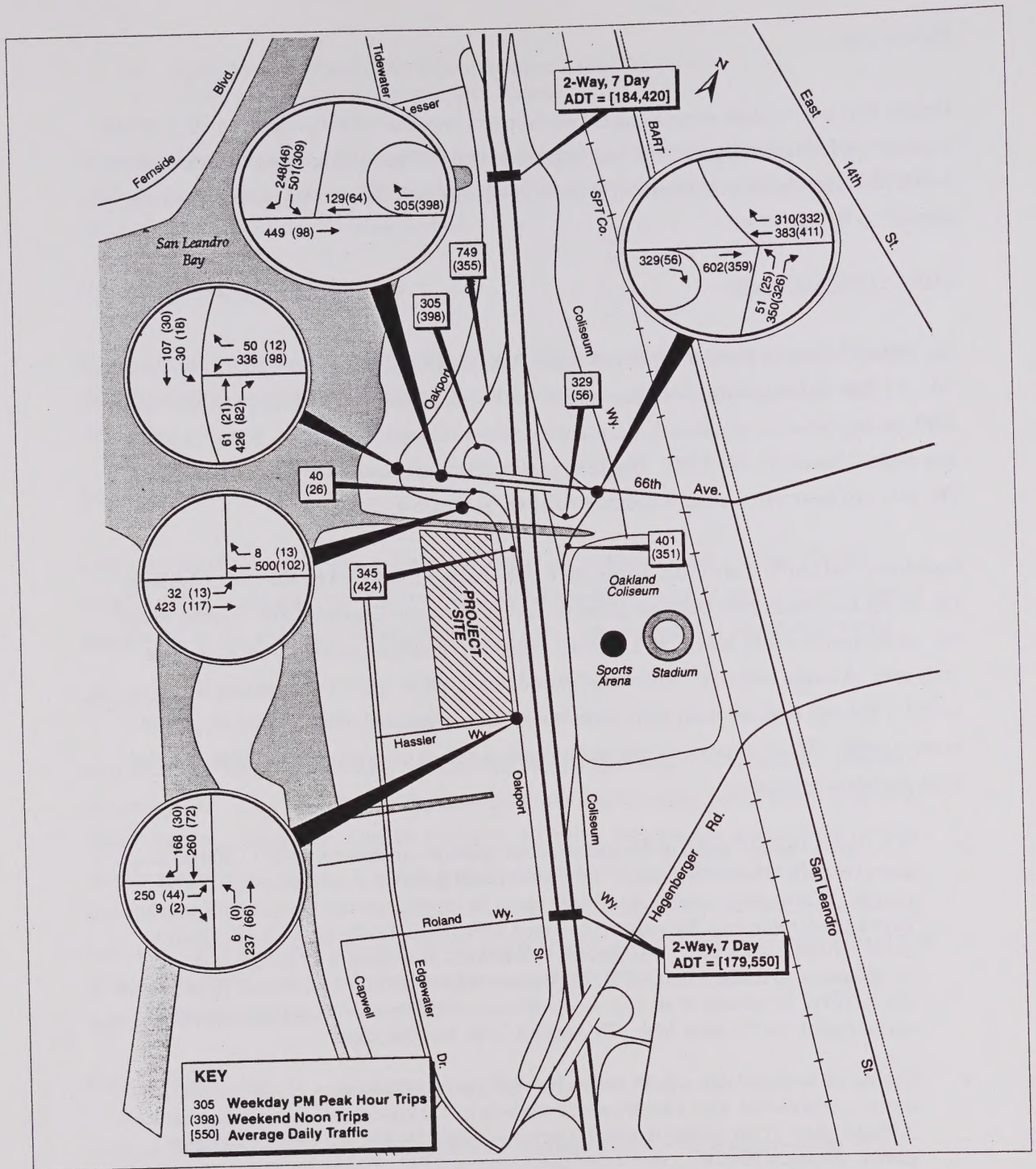


Figure 4.4.2
1993 Existing Traffic Volumes
Without Events at the Coliseum

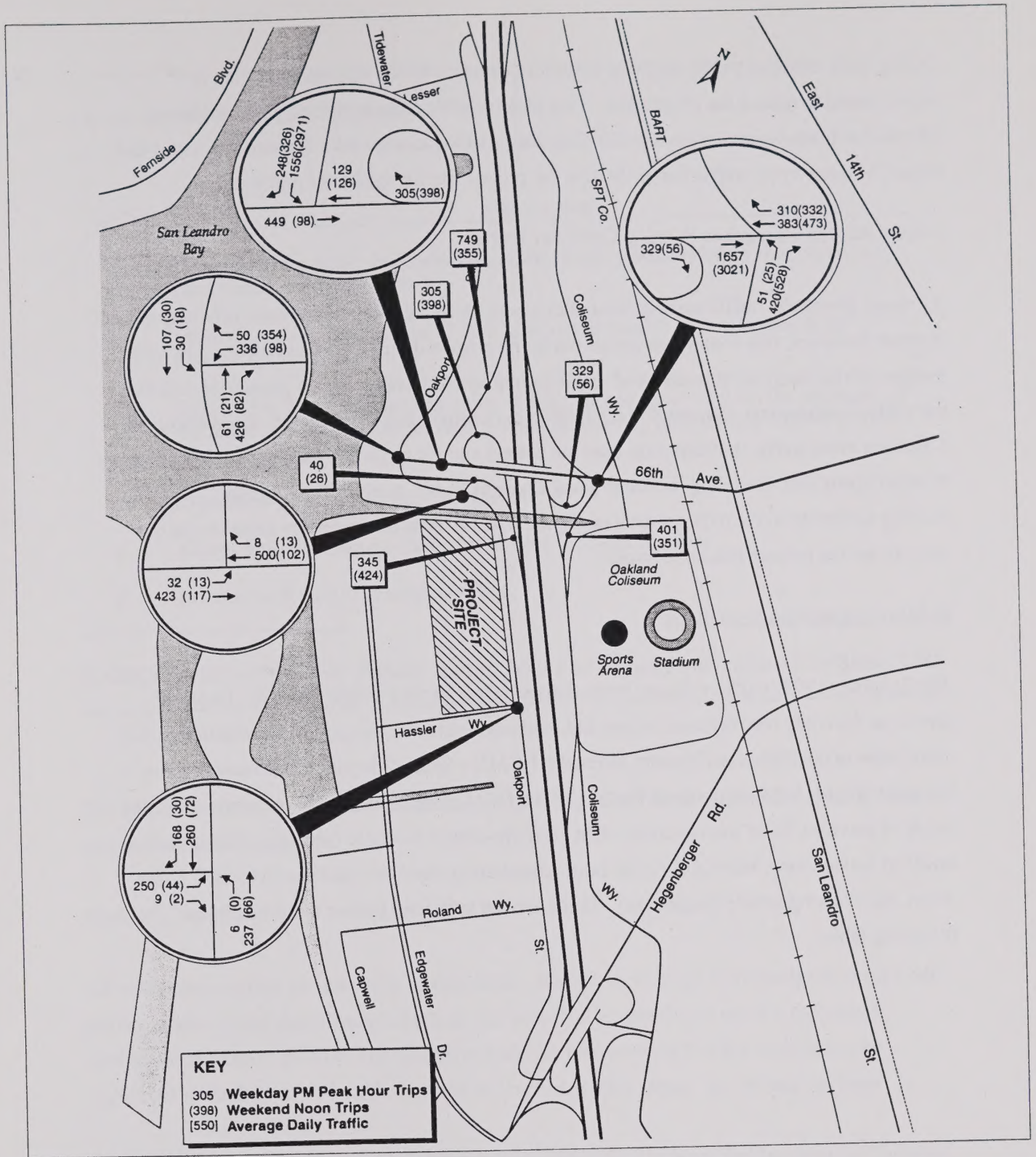


Figure 4.4.3
1993 Existing Traffic Volumes
With Events at the Coliseum

During these inbound traffic surges to Coliseum events, a traffic management plan is implemented to relieve the congestion. This plan includes closure of the I-880 northbound off-ramp at 66th Avenue as soon as the Coliseum parking lots are full. It should be noted that some Coliseum event traffic currently uses the project site for spill-over parking.

Project-Related Changes to Existing Coliseum Traffic

As stated above, the traffic management plan would close the I-880 northbound off-ramp at 66th Avenue; however, this would prevent access to the proposed project from this ramp. For the purpose of this analysis, it is assumed that the ramp would have to remain accessible, and that the traffic management plan would be modified to accommodate this change. In addition, the Coliseum event traffic that currently uses the project site for spill-over parking would have to be diverted elsewhere, including locations along Oakport Street, north of 66th Avenue. The existing Coliseum event traffic shown on Figure 4.4.3 reflects the necessary adjustments to account for the project-related changes.

Existing Intersection Operations

The Existing (1993) traffic volumes were analyzed to determine traffic operation levels of service at the study intersections, ramps and roadway segments, using analysis techniques and procedures in the Highway Capacity Manual ("HCM") - Special Report 209 (Transportation Research Board, 1985, or the draft Update 1994) HCM analysis techniques generate operating levels of service ("LOS") to describe traffic flow conditions for these facilities. The operating levels of service vary from LOS A (the best, representing free flow conditions) to LOS F (the worst, representing severe congestion). These service levels are further described in the following table:

LEVEL OF SERVICE DESCRIPTION

LOS	Description
A	Represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	Stable flow, but marks the beginning of the range in flow in which the operation of the individual users becomes significantly affected by interactions with others in the traffic stream.
D	Represents high density but stable flow.
E	Represents operating conditions at or near the capacity level.
F	Represents forced or breakdown flow.

SOURCE: *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 1985

The City of Oakland and Caltrans have adopted LOS D as the minimum standard of acceptable service for traffic operations.

Method of Analysis

All study intersections are currently unsignalized. Study intersections were analyzed using both the unsignalized and signalized methods of analysis. It is acceptable to use the signalized method of analysis to provide a comparative basis for intersections that are expected to be signalized in the future. All methods result in level of service ratings for the intersections.

The unsignalized intersections were analyzed using either the Unsignalized Intersection Capacity Analysis where stop signs are located only on side streets, or the Multi-Way Stop Control Method where all approaches are stopped.

- **Unsignalized Intersection Capacity Analysis:** The operating condition for an unsignalized intersection that is STOP-sign controlled on the minor approaches is defined by the reserve capacity (R.C.). This method establishes a level of service for each minor turning movement. The through movements on the main street are assumed to operate at free flow and a Level of Service A. This method is provided in the HCM 1985.
- **Multi-Way Stop Control Method:** This is used for three-, four-, or multi-way STOP-controlled intersections. The method determines a level of service based on the total approach volumes and the assumed capacity. The operating condition of the intersection is defined by the average delay experienced by drivers. This method is provided in the Draft Update HCM 1994.

The signalized method used for these same intersections is the Operations Method for Signalized Intersections as specified in the HCM 1985. The operating condition or level of service is defined by the average delay experienced by drivers.

Table 4.4.1 provides the definitions and criteria relevant to the above methods.

Intersection Levels of Service

The Existing (Year 1993) (without Coliseum Events) intersection levels of service are shown in Table 4.4.2.

Stop Controlled Operation without Coliseum Events

Operations at the intersection of Oakport/Hassler are acceptable. The eastbound left-turn movement operates at LOS D during the weekday PM peak hour, while all other movements at this time, as well as during the weekend noon peak, are at LOS A. Caltrans' Peak Hour Signal Warrants are not met.

TABLE 4.4.1: LEVEL OF SERVICE (LOS) CRITERIA

SIDE STREET STOP-CONTROLLED INTERSECTIONS

LOS	RESERVE CAPACITY
A	400 or more
B	300 to 399
C	200 to 299
D	100 to 199
E	0 to 99
F	Less than 0

ALL-WAY-STOP-CONTROLLED INTERSECTIONS

LOS	AVERAGE STOPPED DELAY (Seconds per Vehicle)
A	Less than 5.0 seconds
B	5.1 to 10 seconds
C	10.1 to 20 seconds
D	20.1 to 30 seconds
E	30.1 to 45 seconds
F	45.1 seconds or above

SIGNALIZED INTERSECTIONS

LOS	AVERAGE STOPPED DELAY (Seconds per Vehicle)
A	Less than 5.0 seconds
B	5.1 to 15 seconds
C	15.1 to 25 seconds
D	25.1 to 40 seconds
E	40.1 to 60 seconds
F	60.1 seconds or above

SOURCE: *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 1985 and 1994

TABLE 4.4.2: EXISTING INTERSECTION LEVELS OF SERVICE (Unsignalized Intersections Method)

Side Street Stop Controlled Intersections:

Existing Conditions
Without Coliseum Events

<u>Intersection</u>	<u>Peak Hour</u>	<u>Movement</u>	<u>Reserve Capacity</u>	<u>LOS</u>
1. Oakport St./ Hassler Way	weekday PM	EB left	169	D
		EB right	884	A >(n)
		NB left	829	A
	weekend noon	EB left	742	A
		EB right	998	A >(n)
		NB left	1000	A
2. I-880 SB On-ramp/ Oakport St.	weekday PM	EB left	728	A
	weekend noon	EB left	986	A >(n)
5. I-880 NB ramps/ 66th Ave.	weekday PM	NB left	38	E
		NB right	314	B >(y)
	weekend noon	NB left	128	D
		NB right	187	D >(y)

All-Way Stop Controlled Intersections:

<u>Intersection</u>	<u>Peak Hour</u>	<u>Movement</u>	<u>Delay</u>	<u>LOS</u>
3. Oakport St./ 66th Ave.	weekday PM	WB approach	4.7	A
		NB approach	*	F >*(n)
		SB approach	2.9	A
	weekend noon	WB approach	1.7	A
		NB approach	4.6	A >A(n)
		SB approach	1.5	A
4. I-880 SB off-ramp/ 66th Ave.	weekday PM	EB approach	45.9	F
		WB approach	3.9	A >D(y)
		SB approach	18.4	C
	weekend noon	EB approach	6.4	B
		WB approach	3.9	A >A(n)
		SB approach	3.4	A

* Value is out of range of model application. Analysis result needs to be treated with caution.

(n) Caltran's Peak Hour (No.11) Signal Warrants are not met.

(y) Caltran's Peak Hour (No.11) Signal Warrants are met.

(continued)

TABLE 4.4.2: EXISTING LEVELS OF SERVICE (Signalized Intersections Method)
(continued)

		Existing Conditions			
		Without Coliseum Events	With Coliseum Events		
<u>Intersection</u>	<u>Peak Hour</u>	<u>Delay</u> veh/sec	<u>LOS</u>	<u>Delay</u> veh/sec	<u>LOS</u>
1. Oakport/ Hassler Way	weekday PM	7.6	B	7.6	B
	weekend noon	6.6	B	6.6	B
2. SB on-ramp/ Oakport St.	weekday PM	1.3	A	1.3	B
	weekend noon	1.6	A	1.6	A
3. Oakport St./ 66th Ave.	weekday PM	8.6	B	8.6	B
	weekend noon	6.6	B	6.8	B
4. I-880 SB off-ramp/ 66th Ave.	weekday PM	7.4	B	11.2	B
	weekend noon	6.6	B	64.1	F
5. I-880 NB ramps/ 66th Ave.	weekday PM	8.6	B	12.7	B
	weekend noon	8.3	B	*	F

* Volume-to-Capacity ratio in excess of 1.2 is meaningless.

SOURCE: Korve Engineering, Inc., 1994.

The unsignalized intersection of I-880 Southbound on-ramp/Oakport is acceptable. It operates at LOS A during both peak hours.

The intersection of Oakport/66th Avenue is acceptable. The intersection was tested against Caltrans' Peak Hour (No.11) Signal Warrants and determined not to meet these warrants.

The intersection of I-880 Southbound off-ramp / 66th Avenue operates at LOS D during the weekday PM peak hour. However the eastbound approach is at LOS F, and the intersection meets Caltrans' Peak Hour Signal Warrants. The intersection is at LOS A during the weekend noon peak hour.

Conditions on the northbound approach at the intersection of I-880 Northbound ramps / 66th Avenue are currently unacceptable. During the weekday PM peak hour, the northbound left-turn movement reaches LOS E. During the weekend noon peak, the northbound left-turn movement reaches LOS D. Caltrans' Peak Hour Signal Warrants are met for both peak periods.

Signalized Operations without Coliseum Events

The intersections, under existing conditions, were also evaluated using the signalized operations method; the results are shown on Table 4.4.2. If the Oakport/Hassler intersection were to be signalized, the intersection would operate at LOS B during both peak hours. The intersection of I-880 Southbound off-ramp / 66th Avenue would, if signalized, operate at LOS B during both peak hours. Signalizing the intersection of I-880 Northbound ramps / 66th Avenue would improve conditions to LOS B.

Signalized Operations with Coliseum Events

During existing Coliseum sports events, most study intersections operate at more congested levels. A limited analysis was conducted of existing traffic conditions during Coliseum events using the signalized method. This was done to facilitate a comparison with the future study scenarios. The results, assuming signalization, show that all study intersections operate at LOS A or B with two exceptions. During the weekend noon peak only, the intersections of I-880 Southbound off-ramp/66th Avenue and I-880 Northbound ramps/66th Avenue reach LOS F.

The detailed calculation sheets for study intersections under existing traffic conditions are on file and available for review at City offices.

Existing Ramp Operations

Ramp Methodology

Existing conditions on the ramps were evaluated using the following method. Ramp traffic volumes were compared to available capacities. The relationship of volume to capacity corresponds with a Level of Service rating. These values were taken from the *Highway 50 Corridor Plan*. It is noted that the method does not imply that there is no congestion on a ramp that is at LOS A. Congestion may occur if intersection operations at the ramp terminus or

freeway congestion cause a back-up of traffic along the ramp; however, this method does indicate whether the ramp itself is adequately sized for the volumes.

Existing Ramp Levels of Service

The results of the ramp analysis are shown in Table 4.4.3. Under Existing (1993) traffic conditions without Coliseum events, all ramps have adequate capacity for the traffic volumes and operate at LOS A. Under conditions with Coliseum events, all ramps except one are at LOS A. The exception is the I-880 southbound off-ramp which reaches a borderline LOS B/C during the weekday PM peak and LOS F for the weekend noon peak.

TABLE 4.4.3: EXISTING RAMP LEVELS OF SERVICE

<u>Ramp</u>	<u>Peak Hour</u>	Existing Conditions		<u>Vol.</u>	<u>LOS</u>
		Without Coliseum Events	With Coliseum Events		
I-880 SB on-ramp (1 lane)	weekday PM	345	A	345	A
	weekend noon	424	A	424	A
I-880 SB off-ramp (2 lanes)	weekday PM	749	A	1,804	B/C
	weekend noon	355	A	3,297	F
I-880 EB to NB on-loop (1 lane)	weekday PM	329	A	329	A
	weekend noon	56	A	56	A
I-880 NB off-ramp (2 lanes)	weekday PM	401	A	471	A
	weekend noon	351	A	553	A

SOURCE: Kolve Engineering, Inc., 1994.

Existing Weaving Operations

Method of Analysis

A weaving analysis was conducted on northbound I-880 between successive on-ramps and off-ramps at Hegenberger Road and 66th Avenue. Levels of service in weaving areas are directly

related to the average speeds of weaving and non-weaving vehicles, and to whether weaving operations are constrained or unconstrained. A level of service is separately assigned to weaving and non-weaving vehicles to reflect cases in which significant differences in the speed of component flows exist (i.e., constrained operations), as well as those in which balanced operation occurs (i.e., unconstrained operations).

Existing Weaving Levels of Service on I-880

The results of the weaving analysis are summarized in Table 4.4.4. Under both Existing (1993) traffic conditions without and with Coliseum events, weaving operations on I-880 at the study location would be unconstrained. During the weekday PM peak, weaving vehicles operate at

TABLE 4.4.4: EXISTING WEAIVING CONDITIONS

<u>Location</u>	<u>Peak Hour</u>	<u>Movement</u>	<u>Operation</u>	Existing Conditions			
				Without Coliseum Events		With Coliseum Events	
				<u>LOS</u>	<u>Speed</u>	<u>LOS</u>	<u>Speed</u>
I-880 between Hegenberger NB on-ramps and 66th Ave. NB Off-Ramp	weekday PM	weaving vehicles	Unconstrained	D	43	D	43
		non-weaving		C	49	C	49
	weekend noon	weaving vehicles	Unconstrained	C	45	C	45
		non-weaving		C	52	C	52

SOURCE: Korve Engineering, Inc., 1994

LOS D conditions and non-weaving vehicles at LOS C. At the weekend noon peak, conditions are LOS C for both weaving and non-weaving vehicles.

Arterial Operations

Method of Analysis

The roadway segment of Oakport Street at the bridge over the Damon Slough was evaluated to see if it operates acceptably. The operations method applied for analyzing this arterial roadway is based on the 1985 Highway Capacity Manual. For this method, the arterial level of service is based on the average travel speed for the segment, section, or entire arterial under consideration. This is the basic measure of effectiveness. The average travel speed is computed from the running time on the arterial segment(s) and the intersection approach delay. The average travel speed of all through-vehicles on the arterial is strongly influenced by the number of signals per mile and the average intersection delay. On a given facility, such factors as inefficient signal timing, poor progression, and increasing traffic flow can substantially degrade the arterial LOS. Arterials with high signal densities are even more susceptible to these factors.

Oakport Street Existing Levels of Service

On Oakport Street, at the bridge over the Damon Slough, existing traffic volumes during the weekday PM peak study hour are approximately 510 northbound trips and 420 southbound trips. During the weekend noon peak study hour, there are 130 northbound trips and 120 southbound trips.

A typical two-lane road has a capacity limit of 800 vehicles per hour per lane. Since the existing volumes on Oakport Street are significantly below this standard, and intersection operations are acceptable, it is not necessary to analyze these conditions using the operations method. According to the above capacity, Oakport Street conditions are acceptable.

Existing and Planned Transit Facilities

The Coliseum Shoreline Project Site is directly served by the Alameda Contra Costa Transit District ("AC Transit") Route 98. Route 98 connects directly to BART at the Coliseum Station. As an alternative, the walking distance from the BART Coliseum Station to the project site is approximately one mile.

AC Transit

Route 98 connects directly to the project site with a stop on Hassler Road. The route also connects with BART at the Coliseum Station thereby providing regional public transit access to the project site. In addition, connections to AC Transit routes 45, 46, 49, 56, and 58 are accommodated at the Coliseum BART station, thereby providing localized public transit access to the project. Figure 4.4.4 shows Route 98 and other routes that connect to the Coliseum BART Station.

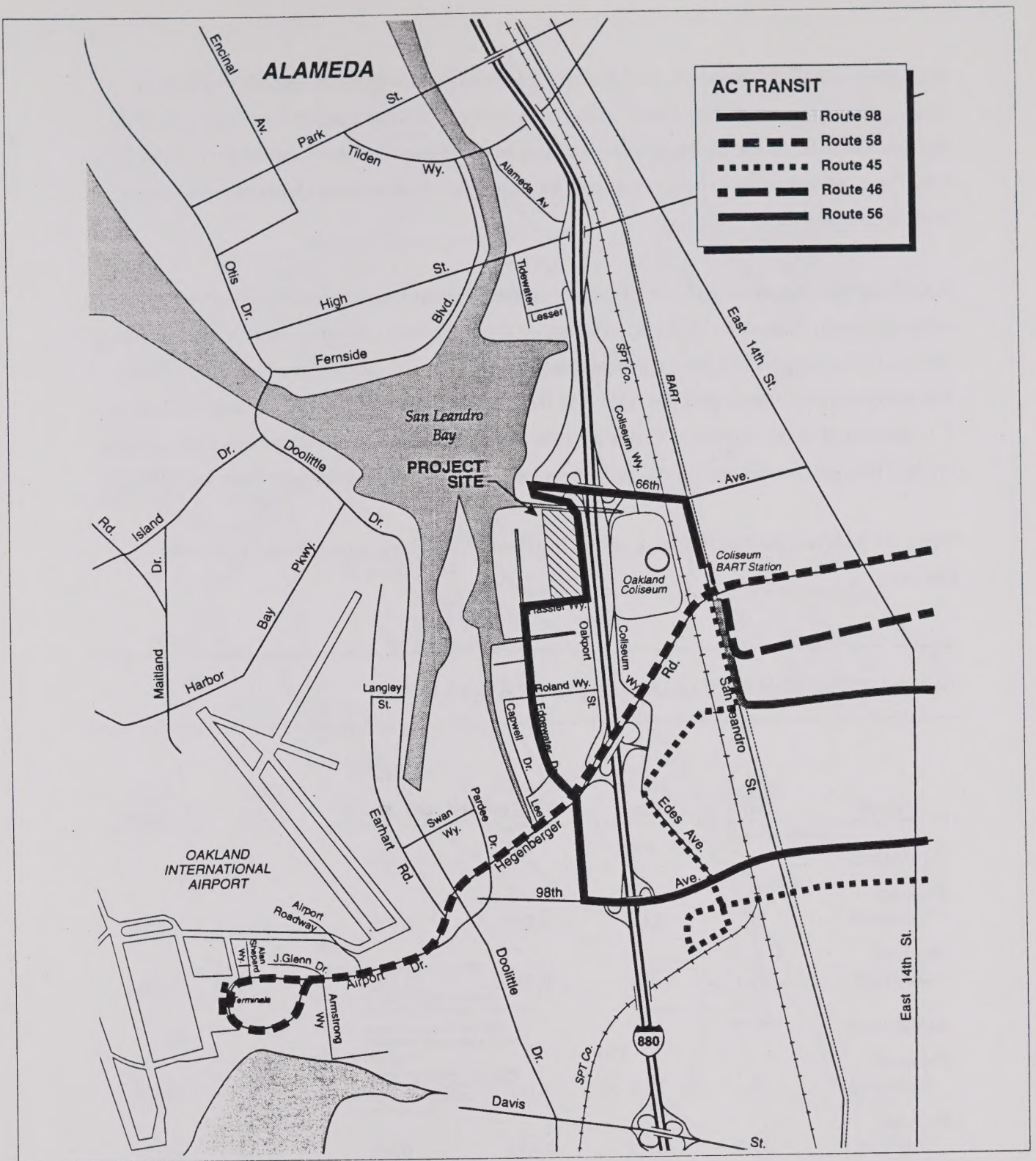
Route 98 runs between MacArthur Boulevard and 90th Avenue principally along 98th Avenue, Empire, Edgewater, Hassler, Oakport and 66th Avenue to San Leandro Street accessing the Coliseum BART Station. The route operates from 6:00 AM to 8:00 PM Monday through Friday on half-hour headways, that decrease to 15 minute headways during peak AM commute periods and 20 minute headways during PM commute periods. Saturday, Sunday and holiday service operates on half-hour headways from 6:00 AM to 8:00 PM. The other routes serving the Coliseum BART Station operate on similar schedules with the exception of the 58 Route which operates from 6:00 AM to 1:00 AM at 12 to 20 minute frequencies seven days a week. AC Transit operates the route service with 47-seat buses. Passenger load information for Route 98 is as follows:

AC Transit Route 98/Load Factor

<u>Route</u>	<u>PM Peak Average Load Factor</u>	<u>Passengers per Service Hour</u>
Route 98 -98th Avenue	0.42	21

BART/Coliseum Station

BART provides regional public transit service to the Coliseum area via its 71-mile rail system. Figure 4.4.5 maps the extent of the BART system. BART operates generally from 4:00 AM to midnight weekdays, from 6:00 AM to midnight on Saturdays, and 8:00 AM to midnight on Sundays and holidays. The Coliseum Station is on the Daly City (San Francisco)-Fremont and Richmond-Fremont lines. Direct service on these lines is provided weekdays until approximately 8:00 PM on 15-minute headways, and Saturdays until 6:00 PM on 20-minute headways. The Daly City-Fremont line is also provided after 8:00 PM weekdays, 6:00 PM



SOURCE: Kolve Engineering

Coliseum Shoreline / 930397 ■

Figure 4.4.4
Existing AC Transit Service

Saturdays, and all-day Sundays, on 20-minute headways. During these evening and Sunday hours, passengers on the Daly City-Concord line going to or from the San Francisco side of the Bay must transfer to the Richmond-Fremont line in downtown Oakland. Passengers on the Daly City-Concord line going to or coming from locations east of downtown Oakland must always transfer in downtown.

BART operates supplemental special service on the Fremont-bound lines to accommodate events at the Coliseum Complex. Peak period trains are typically 7-10 car trains with a seating capacity of 504-720 passengers (72 passengers per car) and a seated and standing load capacity of 680-970 passengers (97 passengers per car). The BART standard for acceptable average loading is 1.15 percent of seated capacity. Loads over the standard seated and standing passenger capacity on the Fremont-bound lines are typically associated only with Coliseum post-event service.

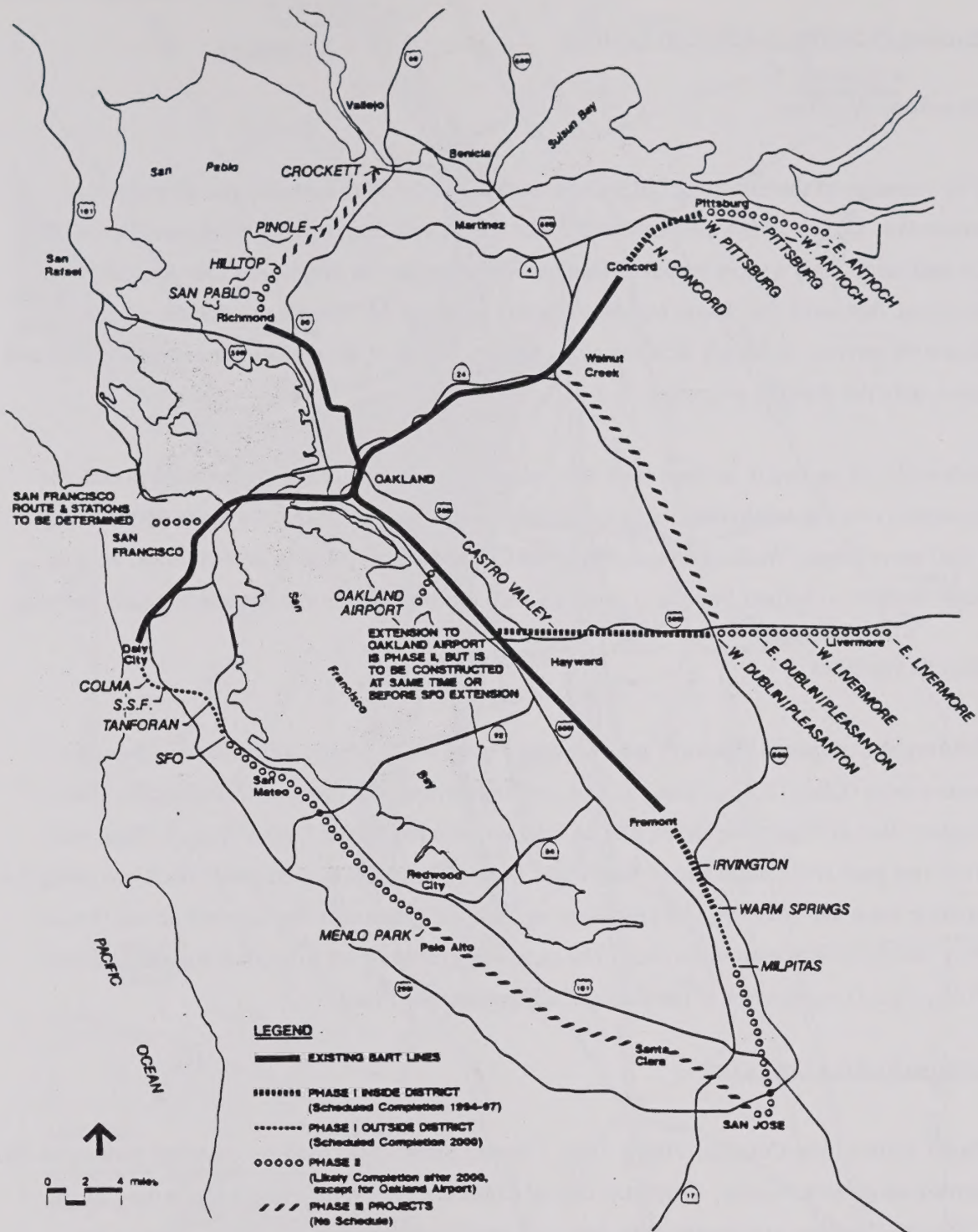
Table 4.4.5 shows average PM peak period load factors for trains accessing the Coliseum Station.

TABLE 4.4.5: AVERAGE PM PEAK PERIOD LOADS ON BART /a/

Route	No. of Trains	No. of Cars	Seated Capacity	Average No. of Passengers	Load Factor	% of Schedule
<i>Northbound:</i>						
Fremont/ Richmond	12	68.1	4,903	2,122	0.43	120%
Fremont/ Daly City	13.1	130.4	9,386	10,459	1.11	100%
<i>Southbound:</i>						
Fremont/ Richmond	12	72.1	5,191	4,146	0.80	113%
Fremont/ Daly City	13.2	131.3	9,452	9789	1.04	101%

/a/ Passenger load factors are measured at each route's maximum passenger screenline point. This is West Oakland-Embarcadero for the Fremont/Daly City line and Lake Merritt-Fruitvale for the Fremont/Richmond lines.

SOURCE: Summary Statistics April to June 1993/BART Short-Range Transit Plan 1993 to 2003.



SOURCE: BART, Service Improvements and Extensions, May 1989.

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Figure 4.4.5
BART Existing Service Area and
Planned BART Extensions

Existing Pedestrian and Bicycle Facilities

Pedestrian Facilities

The boundary of the site along Oakport Street and Hassler Way currently has no pedestrian sidewalks. Dirt shoulders currently exist. The AC Transit Stop serving westbound Route 98 is located here. Only a short stretch of Hassler Way opposite the project site has sidewalk facilities, that serve the Unisys building, leading up to the AC Transit stop for the eastbound Route 98 service. Sidewalk facilities along Oakport south of the project site are also limited and serve only the abutting properties.

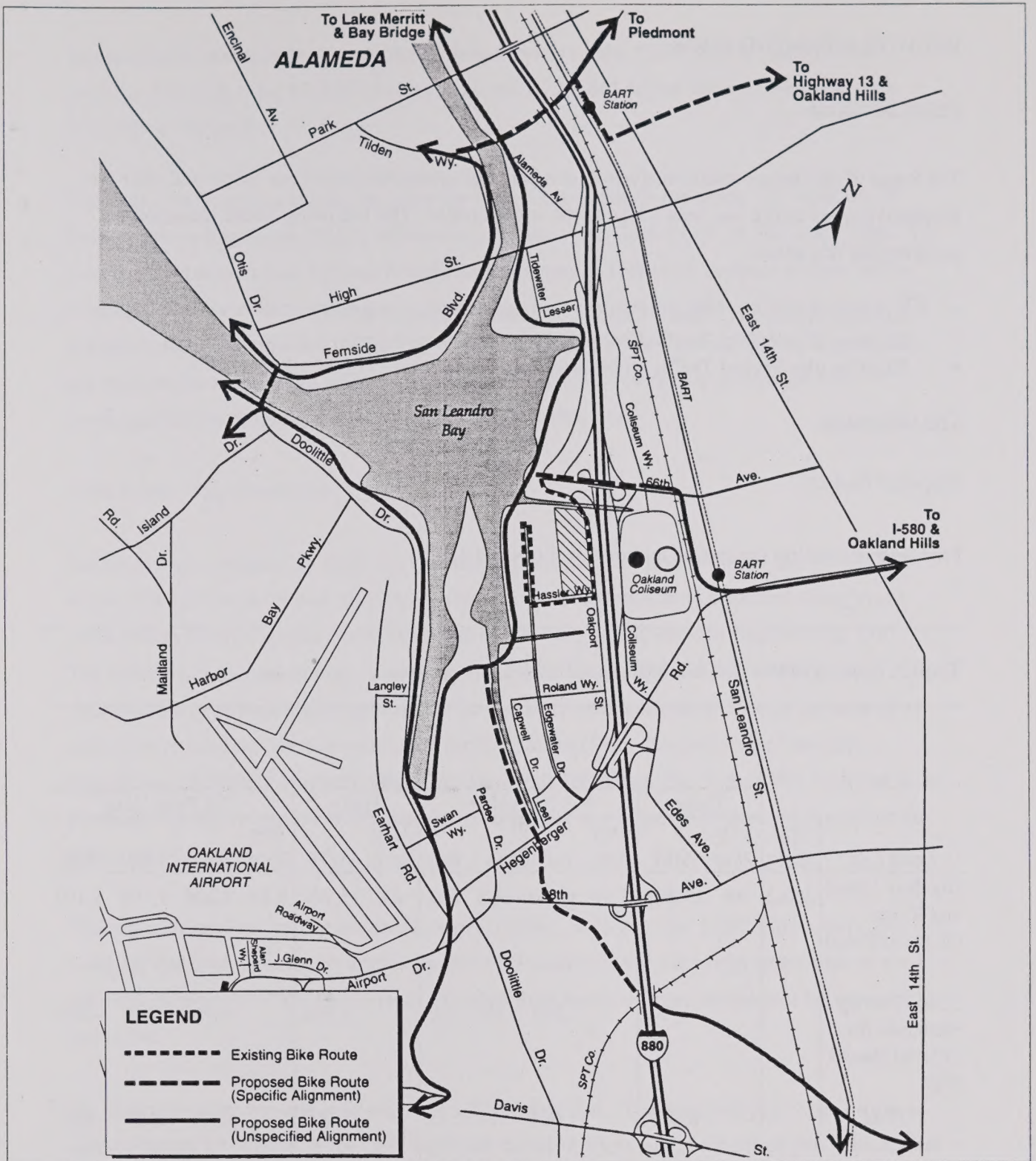
Sidewalks are generally in place from the Coliseum BART Station to the project site with the exception of a one-tenth mile distance from the north boundary of the site to the 66th Avenue / I-880 interchange. Walking distance from the Coliseum Station out to 66th Avenue, west on 66th Avenue to Oakport Street and south on Oakport Street to the site is approximately one mile.

Bicycle Facilities

Existing and proposed bikeways are shown on Figure 4.4.6. The existing bikeway is a sign-posted route (Class III bike route) on Oakport Street from 66th Avenue to Hassler Way, on Hassler Way to Edgewater Drive, and on Edgewater to the Martin Luther King, Jr. Regional Shoreline park at the north end of Edgewater Drive. The roadway pavement conditions along the existing route are adequate, although there are railroad spur tracks that traverse across Hassler Way which cyclists must cross over. The proposed bikeways are from *Map 4 of the Oakland Policy Plan* (a component of the *Oakland Comprehensive Plan*).

Existing Parking Conditions

Under normal (non-Coliseum event) times, Oakport Street is not used for on-street parking in the immediate project vicinity. Currently, during Coliseum events, the project site is used by the Coliseum Complex to accommodate their spill-over parking. With the construction of the proposed project, it is expected that parking for Coliseum events will be accommodated elsewhere. Some event parking is likely to be accommodated along Oakport Street north of 66th Avenue.



SOURCE: Korve Engineering

Coliseum Shoreline / 930397 ■

Figure 4.4.6
Oakland Existing and Planned Bikeways

IMPACTS AND MITIGATION

Future Scenarios

The focus of the transportation analysis is to compare transportation conditions *before* and *after* the proposed project traffic has been added to the street system. The following future scenarios are analyzed for this study:

- Existing plus Project Traffic Conditions without Coliseum Events
- Existing plus Project Traffic Conditions with Coliseum Events
- Existing plus Project Traffic Conditions with Cumulative Coliseum Events

Trip Generation

Proposed Project:

Proposed project trip generation is shown in Table 4.4.6.

TABLE 4.4.6: PROJECT TRIP GENERATION

Land Use	Size (ksf)	Weekday						Weekend					
		Daily		PM Peak Hour				Daily		PM Peak Hour			
		Trip Rate	ADT	Trip Rate	Total	In	Out	Trip Rate	ADT	Trip Rate	Total	In	Out
Big-Box Retail and Value- Oriented Retail	250.2	46	11,509	5.29	1,324	662	662	63	15,762	8.82	2,206	1,103	1,103
Less 22% trip reduction for internal shared trips			-2,531		-290	-145	-145		-3,468		-486	-243	-243
TOTAL			8,977		1,034	517	517		12,294		1,720	860	860

NOTE: All rates shown are vehicle trips per 1,000 square feet of building space.

SOURCE: Kolve Engineering, Inc., 1994

The project is estimated to generate 8,977 daily weekday trips, 1,034 (517 in and 517 out) weekday PM peak trips, 12,294 Saturday trips and 1,720 (861 in and 860 out) weekend peak hour trips at the project driveways.

The Coliseum Shoreline Project includes the Price-Costco warehouse store. The Institute of Transportation Engineers ("ITE") defines stores of the Price-Costco type as Discount Clubs. The project would also include value-oriented retail shopping. (This study assumes closure of the existing Costco store three miles away in San Leandro as an indirect effect of this project.) ITE trip generation data provided in *Trip Generation, 5th Edition*, for Discount Clubs is limited and not reliable due to the small number of samples studies. Therefore, trip generation was developed for the proposed project based on the following data.

Price-Costco Trip Generation

Research was conducted on count data measured previously at various Costco and Price Club stores. This information was supplied by Price-Costco, an article in ITE Journal, dated April 1994, and in a traffic impact study conducted by Dowling Transportation Engineering, 1987. The variation in individual rates from the average rates was as much as 30 percent for the weekday PM peak hour and 40 percent for the weekend noon peak hour. For the purpose of a conservative estimate, the trip generation for the Oakland Price-Costco is based on rates measured at the former Hayward Price Club (now Price-Costco). The store in Hayward has good patronage, is also located off I-880, and is in the market area adjacent to the market area for the proposed project.

The trip rates applied include a weekday daily trip rate of 46 trips per 1,000 square feet. The weekday PM peak hour incurs approximately 11.5 percent of the daily trips and results in a trip rate of 5.29 trips per 1,000 square feet. The peak hour tends to occur somewhere between 4 PM and 6 PM.

The Saturday daily trip rate is 63 trips per 1,000 square feet. The Saturday peak hour incurs approximately 14 percent of the daily trips and results in a trip rate of 8.82 trips per 1,000 square feet. The peak hour tends to occur somewhere between 12 noon and 3 PM. (Saturday rates were used because they tend to be higher than Sunday rates.)

Value-Oriented Retail Trip Generation

There is currently no available information on possible tenants for the remainder of the value-retail project. Therefore, general assumptions have been made in developing trip generation factors. Value retail typically includes stores such as Wal-Mart, K-Mart, Marshall's, Target, TJ Maxx, Ross Dress for Less, Filene's Basement, PayLess Drugs, Phar-Mor, Nordstrom Rack, MCO (Macy's), Toys "R" Us, Sports Authority, Circuit City, Home Depot, Office Depot, Bed, Bath & Beyond, Crown Books, OfficeMax, and Borders Books. More particularly, discount clubs such as Price-Costco have tended to look for co-anchors such as Home Depot, Levitts Furniture, Sports Authority, Petsmart, Marshall's, Drug Emporium, and even supermarkets.

Since the rates developed above for the Price-Costco store are close to those for ITE Shopping Centers, the rate described above for Price-Costco was applied, allowing consolidation of the entire proposed project under one set of trip generation rates as shown in Table 4.4.6.

Internal Trips

Shared trips or internal trips are visits made to two or more stores on the same site as part of one trip to the site. The trip generation for individual stores is therefore reduced by 22 percent to account for shared trips.¹ Otherwise, the impact of some trips to the site would be double-counted. These reductions are documented in Table 4.4.5.

Cumulative Growth

Cumulative traffic volumes refers to the addition of traffic generated from the expansion of the Coliseum Arena and other cumulative area projects (pending approval, or under construction) that would affect the study roadways and intersections. A new 20,000 seat Arena has been proposed to be constructed within the Coliseum Complex grounds and the existing 15,000 seat Arena would be demolished. There is no confirmed timeline for this expansion. The additional 5,000 patrons with a mode split of 27 percent auto drivers would generate up to 2,700 more Average Daily Trips. Since a basketball event in the Arena would not be scheduled to overlap with a peak season baseball event, the cumulative trip generation would not impact the weekend noon peak period. It would add to traffic during the weekday PM peak, at which time approximately 15 percent of the total daily trips would travel inbound to the event. Thus the arena expansion would add another 405 inbound weekday PM peak hour trips.

Trip Distribution and Assignment

Proposed Project

The trip distribution and assignment for the project is adapted from that developed in a previous study for a Price Club plus other value-oriented retail use on the same site.² It is further based on a review of ABAG population data for the region, as well as a recognition of the locations of competing developments, not including the existing Costco in San Leandro.

Project trip distribution and assignments are shown on Figure 4.4.7. The figure shows that 50.5 percent of the project trips would travel north on I-880, 19 percent south on I-880, 8.5 percent north on Oakport, 11 percent east on 66th Avenue, 3.5 percent east on Hegenberger Road, and 7.5 percent west on Hegenberger Road.

The project site is located in the south-west corner of the I-880 interchange at 66th Avenue and can also be accessed via the I-880 interchange at Hegenberger Road, to the south. However, the project would be visible from I-880 only at the 66th Avenue interchange and this interchange provides the most direct access. Accordingly, the EIR analysis is based on the conservative assumption that all project traffic accessing the project site from I-880 would use the interchange at 66th Avenue.

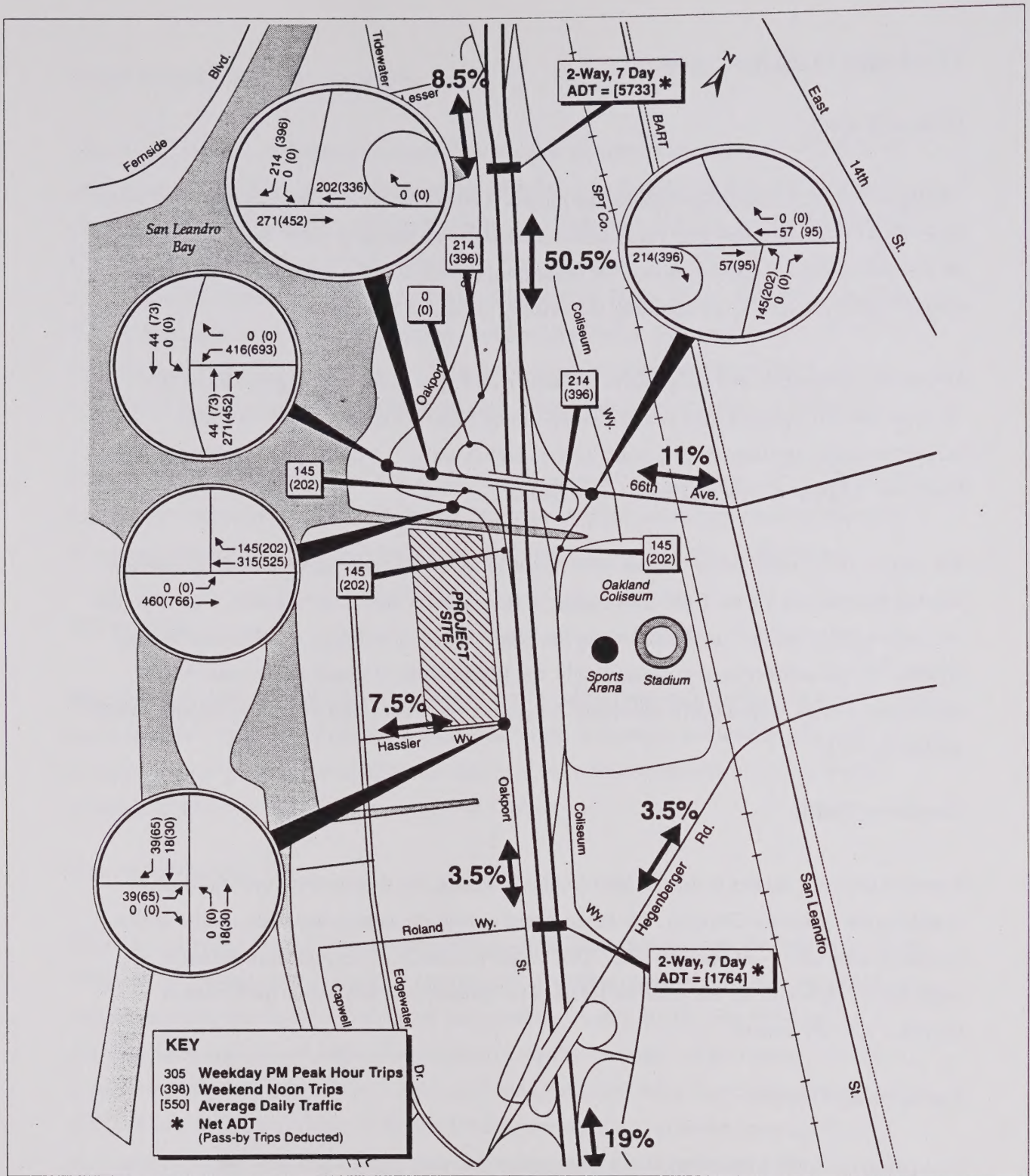
Cumulative Traffic

Based on previous studies at the Oakland Coliseum Arena, trip distribution for added traffic headed to the Coliseum Complex, due to the Arena expansion, is assumed to be similar to that for the existing Coliseum-bound traffic. This is approximately 43 percent from the north on I-880 and 31 percent from the south on I-880. The remainder would access the Coliseum Complex via local streets.

Future Traffic Volumes

Project trip generation, distribution and assignment data were used to derive the Project Only traffic volumes shown on the following Figure 4.4.7.

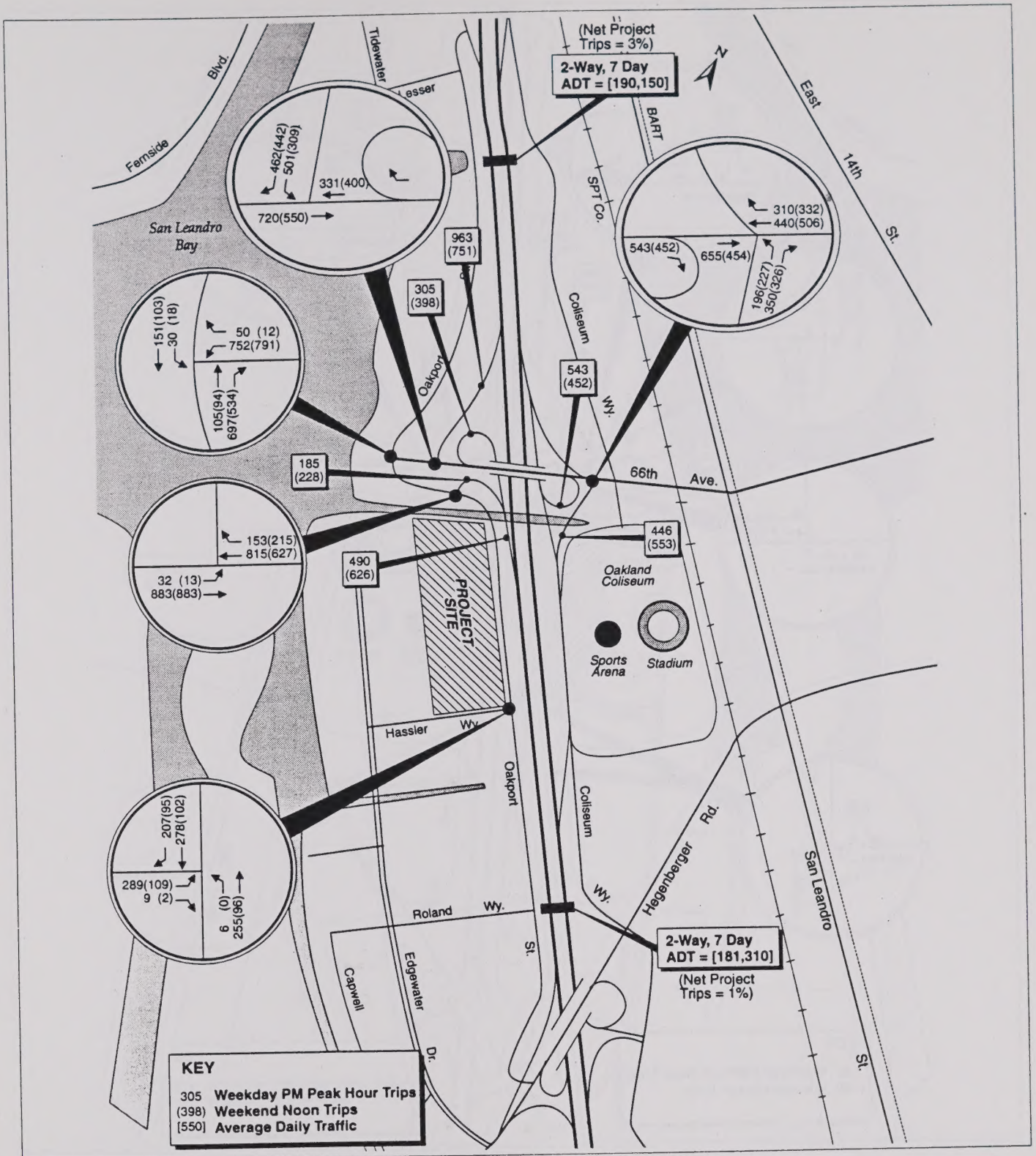
The future scenarios with project and cumulative traffic added to existing traffic volumes are shown in Figures 4.4.8 (Existing plus Project Traffic Volumes without Coliseum Events), 4.4.9



SOURCE: Korve Engineering

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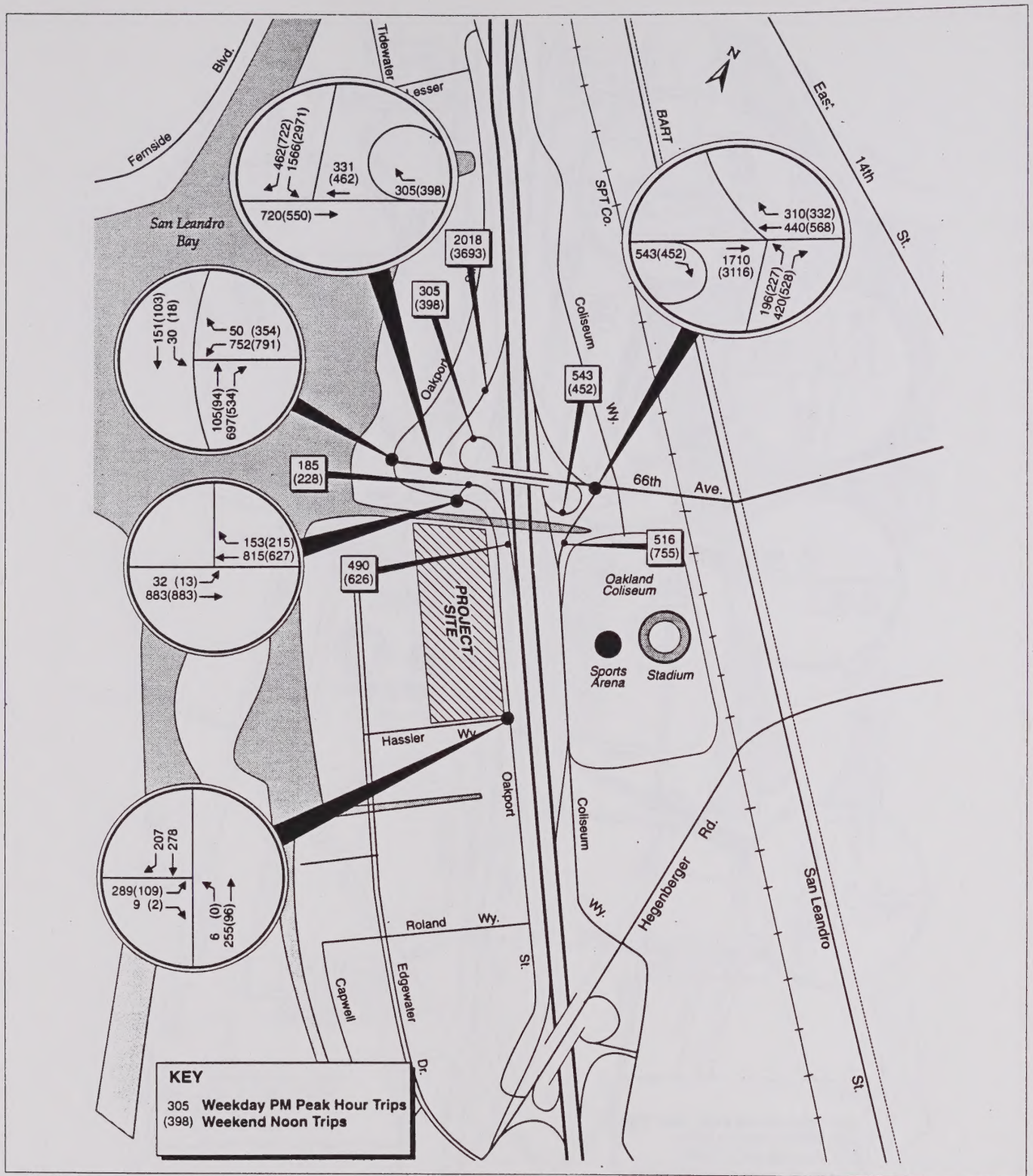
Figure 4.4.7
Project Trip Distribution and
Project Only Traffic Volumes



SOURCE: Kolve Engineering

Coliseum Shoreline / 930397 ■

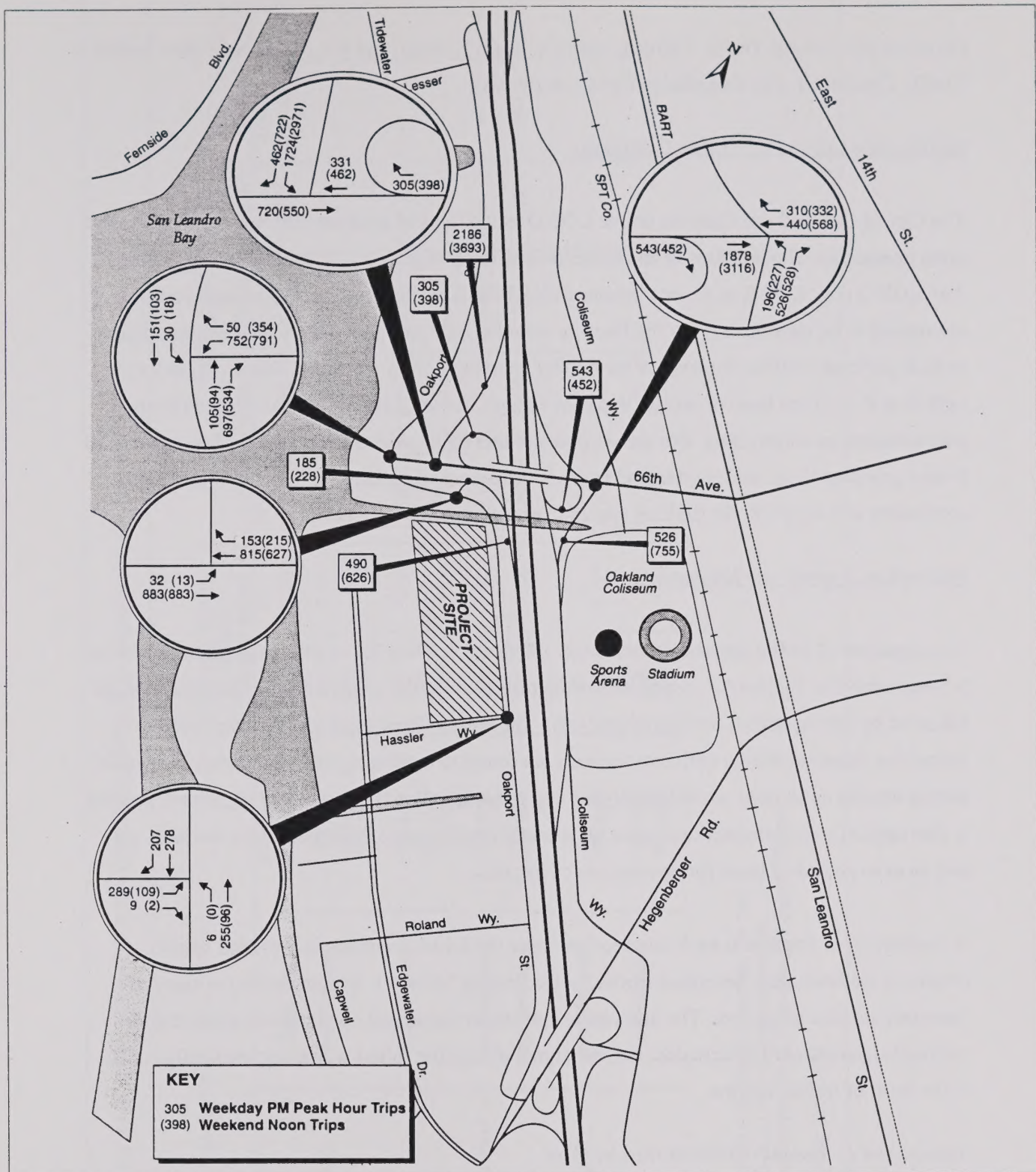
Figure 4.4.8
Existing and Project Traffic Volumes
Without Events at the Coliseum



SOURCE: Korve Engineering

Coliseum Shoreline / 930397 ■

Figure 4.4.9
 Existing and Project Traffic Volumes
 With Events at the Coliseum



SOURCE: Korve Engineering

Coliseum Shoreline / 930397 ■

Figure 4.4.10
 Cumulative Scenario: Existing and Project Traffic Volumes
 With Cumulative Events at the Coliseum

(Existing plus Project Traffic Volumes with Coliseum Events), and 4.4.10 (Existing plus Project Traffic Conditions with Cumulative Coliseum Events).

Significance Criteria for Traffic Conditions

The City of Oakland and Caltrans define LOS D as the limit of acceptability for intersections and ramp operations. If operations at an intersection or ramp degrades to a level of service worse than LOS D (i.e., LOS E or F), or worsens within LOS E or F conditions, the impact would be considered to be significant. For the freeway weaving analysis, an impact would be considered to be significant if either the level of service for weaving or non-weaving vehicles degrades to LOS E or F, or if the level of service does not change, but weaving operations degrade from unconstrained to constrained. For the purposes of this EIR, parking impacts would be considered to be significant if the parking demand exceeds the proposed parking supply, and there are no convenient and legal off-site parking spaces in proximity to the project site.

Intersection Impacts and Mitigations

A comparison of traffic impacts at each study intersection under the existing and future scenarios is summarized in Table 4.4.7, which shows the results using the unsignalized method of analysis followed by the signalized method of analysis. The unsignalized methods are only used for successive future scenarios until intersections are found to require signals. Scenarios that would further worsen conditions are only analyzed using the signalized method. The signalized method is also applied to all intersections under all scenarios regardless of whether signal warrants are met so as to provide a basis for comparison of impacts.

A description of impacts at each intersection under the future scenarios is provided below. (Analysis methods were described earlier, in the Setting Section.) Recommended mitigation measures are also presented. The analysis results under signalized conditions assume that all installed signals would be actuated; i.e., the signal phases (or splits) would automatically adjust to the level of traffic volume.

Intersection 1: Oakport Street at Hassler Way

Impact 4.4-1: Under Existing plus Project Traffic Conditions without Coliseum Events, this intersection would be at LOS E on the eastbound left-turn, although, the intersection's operation would only marginally meet signal warrants. (SIGNIFICANT)

TABLE 4.4.7: SUMMARY TABLE OF INTERSECTION LEVELS OF SERVICE (Unsignalized Operations Method)

Side-Street Stop Controlled Intersections:			Existing Conditions		Existing Plus Project Conditions					
Intersection	Peak Hour	Approach / Movement	Without Coliseum Events		Without Coliseum Events		With Coliseum Events		With Cumulative Coliseum Events	
			Reserve Capacity	LOS	Reserve Capacity	LOS	Reserve Capacity	LOS	Reserve Capacity	LOS
1. Oakport St. / Hassler Way	weekday p.m.	EB left	169	D (n)	94	E (a)				
		EB right	884	A	847	A				
		NB left	829	A	777	A				
	weekend noon	EB left	742	A (n)	584	A (n)				
		EB right	998	A	994	A				
		NB left	1000	A	995	A				
2. I-880 Southbound On-ramp / Oakport Street	weekday p.m.	EB left	728	A	417	A	417	A	417	A
	weekend noon	EB left	986	A (n)	507	A (n)	507	A (n)	507	A (n)
5. I-880 Northbound ramps / 66th Avenue	weekday p.m.	NB left	38	E	-125	F				
		NB right	314	B (y)	208	C (y)				
	weekend noon	NB left	128	D	-158	F				
		NB right	583	A (y)	350	B (y)				

(n) Caltran's Peak Hour (No.11) Signal Warrants are not met.

(y) Caltran's Peak Hour (No.11) Signal Warrants are met.

(a) Borderline for meeting Caltran's Peak Hour (No. 11) Signal Warrants.

SOURCE: Kolve Engineering, Inc., 1994

(continued)

TABLE 4.4.7: SUMMARY TABLE OF INTERSECTION LEVELS OF SERVICE (Unsignalized Operations Method) (Continued)

All-Way Stop Controlled Intersections:

All-Way Stop Controlled Intersections:			Existing Conditions		Existing Plus Project Conditions					
			Without Coliseum Events		Without Coliseum Events		With Coliseum Events		With Cumulative Coliseum Events	
Intersection	Peak Hour	Approach	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
3. Oakport St. / 66th Ave.	weekday p.m.	WB approach	4.7	A	19.3	C				
		NB approach	*	F	*	F				
		SB approach	2.9	A	5.8	B				
		Intersection	*	F (n)	*	F (y)				
	weekend noon	WB approach	1.7	A	16.0	C				
		NB approach	4.6	A	*	F				
		SB approach	1.5	A	4.5	A				
		Intersection	2.8	A (n)	*	F (y)				
4. I-880 Southbound off-ramp / 66th Avenue	weekday p.m.	EB approach	45.9	F	99.8	F				
		WB approach	3.9	A	10.8	C				
		SB approach	18.4	C	60.8	F				
		Intersection	26.3	D (y)	66.5	F (y)				
	weekend noon	EB approach	6.4	B	22.8	D				
		WB approach	3.9	A	10.8	C				
		SB approach	3.4	A	28.3	D				
		Intersection	4.0	A (n)	22.4	D (n)				

* Value is out of range of model application. Analysis result needs to be treated with caution.

(n) Caltran's Peak Hour (No.11) Signal Warrants are not met.

(y) Caltran's Peak Hour (No.11) Signal Warrants are met.

SOURCE: Korve Engineering, Inc., 1994

(continued)

TABLE 4.4.7: SUMMARY TABLE OF INTERSECTION LEVELS OF SERVICE (Signalized Operations Method) (Continued)

Intersection	Peak Hour	Existing Conditions				Existing Plus Project Conditions					
		Without Coliseum Events		With Coliseum Events		Without Coliseum Events		With Coliseum Events		With Cumulative Coliseum Events	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Oakport St. / Hassler Way	weekday p.m.	7.6	B	7.6	B	8.2	B	8.2	B	8.2	B
	weekend noon	6.6	B	6.6	B	7.0	B	7.0	B	7.0	B
2. I-880 Southbound On-ramp / Oakport Street	weekday p.m.	1.3	A	1.3	A	2.1	A	2.1	A	2.1	A
	weekend noon	1.6	A	1.6	A	1.9	A	1.9	A	1.9	A
3. Oakport St. / 66th Ave.	weekday p.m.	8.6	B	8.6	B	44.1	E	44.1	E	44.1	E
	weekend noon	6.6	B	6.6	B	24.3	C	21.4	C	21.4	C
<i>Mitigated /b/</i>	<i>weekday p.m.</i>					<i>13.9</i>	<i>B</i>	<i>13.9</i>	<i>B</i>	<i>13.9</i>	<i>B</i>
	<i>weekend noon</i>					<i>10.7</i>	<i>B</i>	<i>16.3</i>	<i>C</i>	<i>16.3</i>	<i>C</i>
4. I-880 Southbound off-ramp / 66th Avenue	weekday p.m.	7.4	B	11.2	B	8.5	B	15.0	B	19.5	C
	weekend noon	6.6	B	64.1	F (a)	8.2	B	*	F (a)	*	F (a)
<i>Mitigated /c/</i>	<i>weekday p.m.</i>							<i>10.4</i>	<i>B</i>	<i>10.5</i>	<i>B</i>
	<i>weekend noon</i>							<i>45.1</i>	<i>E</i>	<i>45.1</i>	<i>E</i>
5. I-880 Northbound ramps / 66th Avenue	weekday p.m.	8.6	B	12.7	B	9.2	B	12.9	B	26.1	D
	weekend noon	8.3	B	*	F (a)	8.5	B	*	F (a)	*	F (a)

/a/ Assumes a traffic control plan would include adjusting signal cycle length to 120 seconds during this game event.

/b/ Mitigation is to restripe the westbound right turn lane to a shared left and right turn lane. Accordingly, the departure on the south leg will have to be widened to two lanes to receive the westbound to southbound traffic.

/c/ Mitigation is to widen I-880 Southbound off-ramp to provide two exclusive left-turn lanes and one exclusive right-turn lane.

* Volume-to-Capacity ratios in excess of 1.2 are meaningless.

SOURCE: Korve Engineering, Inc., 1994

No additional impact would result from Coliseum Event traffic. (Less than Significant)

Under Existing plus Project Traffic Conditions without Coliseum Event Traffic, this unsignalized intersection would operate at LOS E on the eastbound left movement and LOS A for all other movements during the weekday PM peak hour. During the weekend noon peak hour the intersection would operate at LOS A for all movements. LOS E indicates very long traffic delays, but conditions would only marginally meet Caltrans' Peak Hour (No.11) Signal Warrants. Operations at this intersection would not worsen further under the other study scenarios, since traffic generated by the Coliseum Complex would not impact this intersection. It is assumed that spill-over sports event traffic needing to park off Oakport Street north of 66th Avenue would be directed to this location without using Oakport Street south of 66th Avenue.

Mitigation Measure 4.4-1: The recommended mitigation under all scenarios is the same since Coliseum event traffic would not impact this intersection. The intersection shall be signalized. With signalization, the intersection would improve to LOS B during both peak hours. LOS B indicates short traffic delays. (Identified in the EIR)

Impact 4.4-1 Level of Significance with Mitigation: Less than Significant.

Intersection 2: I-880 Southbound on-ramp at Oakport Street

Impact 4.4-2: Under Existing plus Project Traffic Conditions without Coliseum event traffic, this unsignalized intersection would operate at LOS A for both peak hours. This is acceptable and therefore is a less-than-significant impact. Operations at this intersection would not worsen under the other study scenarios since traffic generated by the Coliseum Complex would no longer impact this intersection. (Less than Significant)

Mitigation Measure 4.4-2: None Required.

Intersection 3: Oakport Street at 66th Avenue

Impact 4.4-3: Under Existing plus Project Traffic Conditions without Coliseum event traffic, operating conditions at this unsignalized intersection would degrade from existing conditions, including a deterioration to LOS F conditions on the northbound Oakport Street approach during the weekend noon peak hour, and a worsening of LOS F conditions on that approach during the weekday PM peak hour. (SIGNIFICANT)

No additional impact would result from Coliseum Event traffic. (Less than Significant)

Under existing conditions without Coliseum Events, the northbound Oakport Street approach operates at LOS A and LOS F during the weekend noon and weekday PM peak hours, respectively; the other two approaches currently operate at LOS A during both peak hours. Under Existing plus Project Traffic Conditions without Coliseum Events, delays on the northbound approach would increase to an unacceptable level (LOS F) during the weekend noon peak hour, and would exacerbate the LOS F condition during weekday PM peak hour; the other approaches would degrade to LOS C or better during both peak hours. With the addition of Project-generated traffic, the intersection would meet Caltrans' Peak Hour (No.11) Signal Warrant during both peak hours. If signalized, this intersection would operate at LOS E during the weekday PM peak hour, which indicates very long traffic delays and is unacceptable. Assuming signalization, the intersection service level would be LOS C during the weekend noon peak hour. Further mitigation would be required for the weekday PM peak-hour condition.

Traffic generated by Coliseum events is not expected to be substantial enough to require use of and access to parking space off Oakport Street. Therefore, Coliseum events traffic would not impact this intersection. If signalized, this intersection would remain at LOS E during the weekday PM peak hour; during the weekend noon peak hour, the intersection would operate at LOS C. There would be no further increase in traffic at this intersection under Existing plus Project Traffic Conditions with Cumulative Coliseum Events.

Mitigation Measure 4.4-3: The intersection shall be signalized, and the westbound lanes shall be re-striped to two left-turns with a shared right-turn. Correspondingly, the south leg at this intersection shall be widened to two southbound departure lanes to receive the two lanes of traffic traveling westbound to southbound on Oakport Street. With this mitigation, the intersection would operate at LOS B during both peak hours under Existing plus Project Traffic Conditions without Coliseum Events. With current or cumulative Coliseum Events, the intersection would operate at LOS B during the weekday PM peak hour and LOS C during the weekend noon peak hour. LOS B represents short traffic delays and LOS C represents average traffic delays. (Identified in the EIR)

Impact 4.4-3 Level of Significance with Mitigation: Less than Significant.

Intersection 4: I-880 Southbound off-ramp at 66th Avenue

Impact 4.4-4: The eastbound approach to the intersection would operate at LOS F under existing conditions and would meet signal warrants. Under Existing plus Project Traffic Conditions without Coliseum Events, intersection operation would degrade further and the entire intersection would operate at LOS F. Under Existing plus Project Traffic Conditions with Coliseum Events and under Existing plus Project Conditions with Cumulative Coliseum Events, the intersection would operate at LOS F during the weekend noon peak,

even if signalized. Although under all scenarios the intersection or one of its approaches would function at LOS F without project traffic, project traffic would further impair already unacceptable levels of service. Under Existing plus Project Traffic Conditions with Coliseum Events, the project contribution would increase the V/C ratio to greater than 1.2. (SIGNIFICANT)

Under Existing plus Project Traffic Conditions without Coliseum Events, this unsignalized intersection as a whole would operate at LOS F for the weekday PM peak hour and would meet Caltrans' Peak Hour (No.11) Signal Warrants. LOS F represents severe congestion. During the weekend noon peak hour, the intersection would operate at LOS D, which represents long traffic delays. If signalized, the intersection would improve to LOS B during both peak hours.

Under Existing plus Project Traffic Conditions with Coliseum Events, if signalized, this intersection would operate at LOS B during the weekday PM peak hour. The intersection would operate at LOS F during the weekend noon peak hour even with long signal cycles, representing severe congestion. Further mitigation would be required. It is noted that this intersection would operate at LOS F during Coliseum Events even without the Project traffic. However, with the project, the Volume-to-Capacity (V/C) ratio would worsen beyond V/C 1.2.

Under Existing plus Project Traffic Conditions with Cumulative Coliseum Event Traffic, this intersection would worsen further during the weekday PM peak hour, to LOS C. LOS C is acceptable, representing average traffic delays. LOS F operations during the weekend noon peak hour would incrementally worsen.

Mitigation Measure 4.4-4: The intersection shall be signalized. Signalization is needed to improve existing operations on the eastbound approach to the intersection, currently at LOS F. Signalization would improve existing operations, as well as operations with project traffic, to acceptable levels. Under Existing plus Project Traffic Conditions with Coliseum Events, however, the intersection would operate at LOS E under weekend noon scenarios that assume project traffic and Coliseum Events. There is feasible mitigation to improve the LOS though not to acceptable levels (LOS D). (Identified in the EIR)

Impact 4.4-4 Level of Significance with Mitigation: Under Existing plus Project Traffic Conditions without Coliseum Events: Less-than-Significant. Under Existing plus Project Traffic Conditions with Coliseum Events, and Existing plus Project with Cumulative Coliseum Events: SIGNIFICANT.

Intersection 5: I-880 Northbound ramps at 66th Avenue

Impact 4.4-5: The addition of project traffic to Existing Traffic Conditions without Coliseum Events would degrade intersection operations from LOS E to LOS F. Signalization needed under existing traffic conditions would be sufficient to mitigate operations with the project. However, even with signalization, intersection operations would degrade to LOS F with a Volume-to-Capacity (V/C) ratio greater than 1.2, during the weekend noon peak for the scenarios with the Project and Coliseum events. (SIGNIFICANT)

Under Existing plus Project Traffic Conditions without Coliseum Event Traffic, this unsignalized intersection would operate at LOS F on the northbound left-turn movement during both peak hours. Caltrans' Peak Hour (No.11) Signal Warrants would be met. Signal Warrants are already met under existing conditions. If signalized, the intersection would operate at LOS B during both peak hours with project traffic. LOS B represents short traffic delays.

Under Existing plus Project Traffic Conditions with Coliseum Event Traffic, although this intersection would operate at an acceptable LOS B during the weekday PM peak hour, it would operate at an unacceptable LOS F during the weekend noon peak hour, even if signalized.

Under Existing plus Project Traffic Conditions with cumulative Coliseum Event Traffic, with signalization, this intersection would worsen during the weekday PM peak hour to LOS D. The intersection would remain at LOS F during the weekend noon peak.

Mitigation Measure 4.4-5: The intersection shall be signalized. Signalization would improve intersection operation under all scenarios, including Existing Traffic Conditions without Coliseum Events. During weekend noon Coliseum Events, long signal cycles would provide some improvement, although the intersection would continue to operate at LOS F. Further improvement could be obtained by not permitting the northbound to eastbound right-turn movement during sports events. Since ramp operation would be at LOS A, one solution could be for Coliseum-bound traffic from the south to be allowed direct entry to the Coliseum before reaching this intersection. (Identified in the EIR)

Impact 4.4-5 Level of Significance with Mitigation: Under Existing plus Project Traffic Conditions without Coliseum Events: Less-than-Significant. Under Existing plus Project Traffic Conditions with Coliseum Event Traffic, and with Cumulative Coliseum Event Traffic: SIGNIFICANT.

The intersection cannot be adequately mitigated during scenarios with weekend noon Coliseum Events unless the existing Coliseum Traffic Management Plan were revised to include the re-direction of northbound Coliseum Event traffic away from the intersection.

Ramp Impacts at the I-880/66th Avenue Interchange

A comparison of traffic impacts at each study ramp under the existing and future scenarios is summarized in Table 4.4.8.

I-880 Southbound on-ramp

Impact 4.4-6: This ramp would operate at LOS A during the weekday PM peak hour and LOS B during the weekend noon peak hour with project traffic under all scenarios. (Less than Significant)

Mitigation Measure 4.4-6: None Required.

I-880 Southbound off-ramp

Impact 4.4-7: Under Existing plus Project Traffic Conditions without Coliseum Events, the ramp would operate at LOS A during both peak hours. However, under Existing plus Project Traffic Conditions with Coliseum Events, and under Existing plus Project Traffic Conditions with Cumulative Coliseum Events, the ramp would function at LOS F during the weekend noon peak hour. (SIGNIFICANT)

This ramp would operate at LOS A during both peak hours under the Existing plus Project Traffic Conditions without Coliseum Events. Therefore the project impact would be less-than-significant. With Coliseum Events and Cumulative Coliseum Events, the ramp would be at LOS C during the weekday peak hour and LOS F during the weekend noon peak hour. LOS F conditions would occur even without project traffic, but project traffic would increase the V/C ratio.

Mitigation Measure 4.4-7: Under Existing plus Project Traffic Conditions without Coliseum Events: None Required. Under Existing plus Project Traffic Conditions with Coliseum Events: This ramp is already two lanes wide and no additional mitigation is feasible.

Impact 4.4-7 Level of Significance with Mitigation: Under Existing plus Project Traffic Conditions without Coliseum Events: Less than Significant. Under Existing plus Project Traffic Conditions with Coliseum Events, and with Cumulative Coliseum Events: SIGNIFICANT.

TABLE 4.4.8: SUMMARY TABLE OF RAMP LEVELS OF SERVICE

Ramp	Peak Hour	Existing Conditions				Existing Plus Project Conditions					
		Without Coliseum Events		With Coliseum Events		Without Coliseum Events		With Coliseum Events		With Cumulative Coliseum Events	
		Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS	Volume	LOS
I-880 SB on-ramp (one ramp)	weekday p.m.	345	A	345	A	490	A	490	A	490	A
	weekend noon	424	A	424	A	626	B	626	B	626	B
I-880 SB off-ramp (two lanes)	weekday p.m.	749	A	1,804	B/C	963	A	2,018	C	2,186	C
	weekend noon	355	A	3,297	F	751	A	3,693	F	3,693	F
I-880 EB to NB on-loop (one lane)	weekday p.m.	329	A	329	A	543	B	543	B	543	B
	weekend noon	56	A	56	A	452	A/B	452	A/B	452	A/B
I-880 NB off-ramp (two lanes)	weekday p.m.	401	A	471	A	446	A	616	A	722	A
	weekend noon	351	A	553	A	553	A	755	A	755	A

SOURCE: Korve Engineering, Inc., 1994

I-880 Eastbound to Northbound loop on-ramp

Impact 4.4-8: This ramp would operate at LOS B or borderline LOS A/B with project traffic under all future scenarios. (Less than Significant)

Mitigation Measure 4.4-8: None Required.

I-880 Northbound off-ramp

Impact 4.4-9: This ramp would operate at LOS A with project traffic under all future scenarios. (Less than Significant)

The I-880 northbound off-ramp is a slip ramp connected to the frontage road that begins just north of the Hegenberger interchange. The ramp is currently closed during major Coliseum events. It was assumed that with the development of the proposed project, the ramp would have to remain accessible, resulting in a change in the existing Coliseum Traffic Management Plan. Assuming this to be the case, the ramp would operate at LOS A during all scenarios.

Mitigation Measure 4.4-9: None required.

Weaving Operations On Northbound I-880 between Hegenberger Road and 66th Avenue

The results of the weaving analysis are summarized in Table 4.4.9. The weaving analysis is conducted on northbound I-880 between the I-880 Northbound on-ramp at Hegenberger Road and the I-880 Northbound off-ramp at 66th Avenue.

Not all of the trips generated by the project are new to the general area. The project would attract existing trips on the freeway. These are referred to as Pass-by Trips. Adjustments (discounts) are generally made in the analysis to avoid "double counting" these trips. On the basis of survey results presented in *ITE Trip Generation, 5th Edition*, these discounts for a prominent site could range from 40 to 60 percent. For the purposes of the weaving analysis only, weekday PM peak-hour trips were discounted by 40 percent, and weekend noon hour trips were discounted by 20 percent to allow for Pass-by Trips. A 10 percent discount was used for average daily trips to reflect the greater propensity for Pass-by Trips during peak traffic periods than for the day in general.

Impact 4.4-10 (Cumulative): Under Existing plus Project Traffic Conditions without Coliseum Events, during both peak hours, the weaving vehicles would be under LOS D

TABLE 4.4.9: SUMMARY TABLE OF WEAVING ANALYSIS OF NORTHBOUND I-880 BETWEEN THE HEGENBERGER ON-RAMP AND THE 66TH AVENUE OFF-RAMP

		Existing Conditions				Existing Plus Project Conditions						2010 Background Conditions Plus Project	
Peak Hour	Movement	Without Coliseum Events		With Coliseum Events		Without Coliseum Events		With Coliseum Events		With Cumulative Coliseum Events		With Cumulative Coliseum Events	
		LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed	LOS	Speed
weekday p.m.	weaving vehicles	D	43	D	43	D	43	D	43	D*	40	E*	38
	non-weaving vehicles	C	49	C	49	C	49	C	49	C	51	C	50
weekend noon	weaving vehicles	C	45	C	45	D	44	D*	40	D*	40	D*	40
	non-weaving vehicles	C	52	C	52	C	50	C	51	C	51	C	51

* Operation of the weaving area is constrained. Constrained operations occur when weaving vehicles occupy a smaller proportion of the available lanes than desired, while nonweaving vehicles occupy a larger proportion of lanes than for balanced operation. The result of constrained operation is that nonweaving vehicles operate at significantly higher speeds than weaving vehicles.

SOURCE: Korve Engineering, Inc., 1994

conditions and the non-weaving vehicles would be at LOS C. Weaving operations would be unconstrained. However, under Existing plus Project Traffic Conditions with Coliseum Event Traffic during the weekend noon peak, the weaving vehicle movements would be at LOS D and would be constrained. With the addition of Cumulative Coliseum Event Traffic, operations would also become constrained for weaving vehicles during the weekday PM peak. Under Year 2010 conditions, weaving vehicle operations during the weekday PM peak would worsen further to LOS E. (SIGNIFICANT)

Under Existing plus Project Traffic Conditions with Coliseum Events, during both peak hours the weaving vehicles would be under LOS D conditions and the non-weaving vehicles would be at LOS C. The impact would be less-than-significant during the weekday PM peak; however, during the weekend noon peak, conditions would be constrained for the weaving vehicles. This would be a significant impact. It is noted that operations would not be constrained under Existing plus Project Traffic Conditions without the Coliseum Events.

Consideration of cumulative Coliseum events would worsen the weaving conditions during the weekday PM peak. While the LOS rating would remain the same, the weaving operations would be constrained. This would be a significant impact.

An additional analysis was conducted for weaving conditions under Year 2010 Background Traffic Conditions plus Project Traffic Conditions with Cumulative Coliseum Events, because I-880 is part of the Alameda County Congestion Management Agency Network. These projected volumes are based on an estimated increase in existing traffic of 13.2 percent, obtained using projections of the Association of Bay Area Governments. Under these conditions, during the weekday PM peak, the weaving vehicles would be at LOS E, and operations would be constrained. This would be a significant impact. For the weekend noon peak, there would be no further deterioration in weaving operations, and therefore, the LOS rating would not change.

Mitigation Measure 4.4-10: No feasible mitigation for project traffic under future scenarios with Coliseum Events has been identified. (Identified in the EIR).

Operations for weaving vehicles on I-880 between the interchanges at Hegenberger Road and 66th Avenue would become constrained during all future scenarios with Coliseum Events.

Impact 4.4-10 Level of Significance with Mitigation: Under Existing plus Project Traffic Conditions without Coliseum Events: Less-than Significant. Under Existing plus Project Traffic Conditions with Coliseum Events, and with Cumulative Coliseum Events: SIGNIFICANT.

Other Traffic Operations Issues

The peak periods analyzed above occur when traffic is traveling inbound to the Coliseum Events. During outbound event flows, which occur during the weekend PM peak, the proposed project would have closed business before the end of a Coliseum event. On the weekend, however, outbound Coliseum event flows would coincide with traffic to and from the project. Project traffic volumes at such times would only be a little lower than the peak trip generation. At these times, there may be merging capacity problems, in particular at the following locations:

The southbound on-ramp from 66th Avenue to I-880

Merging problems between traffic leaving the Coliseum Complex via the southbound loop on-ramp and project traffic which would access the southbound on-ramp from Oakport Street may occur. The merging problem would occur on the ramp itself before it reaches I-880.

66th Avenue (westbound)

66th Avenue may experience capacity and merging problems with the added project traffic during outbound Coliseum events. There are no recommended physical improvements at the intersection of the I-880 northbound off-ramp at 66th Avenue, beyond the signalization proposed earlier. In addition, the outbound Traffic Management Plan used during Coliseum events would need to be adapted to permit full access of this intersection to accommodate project turning movements. Inbound project traffic traveling northbound on the I-880 off-ramp to 66th Avenue westbound would have to merge with outbound Coliseum event traffic on 66th Avenue destined for the I-880 southbound loop on-ramp.

Arterial Roadway Operations on Oakport Street

Impact 4.4-11: Under all future scenarios, with project traffic, Oakport Street would operate at acceptable levels of service; however, at times, southbound traffic on Oakport could have difficulty accessing the I-880 Southbound on-ramp, between 66th Avenue and the bridge, because of queues of northbound traffic. (SIGNIFICANT)

On Oakport Street at the bridge over Damon Slough, Existing plus Project traffic volumes during the weekday PM peak would be 968 northbound trips and 883 southbound trips. During the weekend noon peak, there would be 881 northbound trips and 883 southbound trips.

Analysis of Oakport Street was conducted, using the Highway Capacity Manual method for arterial segments, assuming that the intersection of Oakport Street at 66th Avenue and the intersection of Oakport at the main project driveway would be signalized, that Oakport Street between 66th Avenue and the bridge would be widened to include two southbound lanes, and that Oakport would be widened to include right-turn deceleration lanes at all project driveways and a continuous center storage lane to accommodate left-turns from the project. The analysis also assumed that Oakport Street at the bridge would not be widened. During the highest peak traffic volumes, Oakport Street between these intersections (including the bridge) would operate at LOS D in the northbound direction and at LOS C in the southbound direction. LOS D is the acceptable standard of the City, and therefore, this would not be a significant impact.

The intersection of Oakport Street at the I-880 Southbound on-ramp is not recommended for signalization because the volumes on the southbound left-turn would be very low and could be stored within the existing left-turn pocket. The northbound queue from 66th Avenue, however, could block left-turn access to the ramp.

Mitigation Measure 4.4-11: Appropriate striping and signage shall be installed at the Oakport Street intersection at the I-880 Southbound on-ramp to keep access to the on-ramp clear at all times. (Identified in the EIR.)

The mitigation measure would keep left-turn access from Oakport to the I-880 Southbound on-ramp clear at all times.

Impact 4.4-11 Level of Significance with Mitigation: Less than Significant.

Transit Impacts

Impact 4.4-12: The proposed project would slightly increase off-peak transit ridership but would not require provision of additional transit service. (Less than Significant)

Two types of transit trips could be generated by the proposed project, including shopper trips and employee trips. Peak employee and shopper access periods associated with this project generally do not coincide with peak commute transit load times. The project, as proposed, would have a minimal impact on transit service in the site vicinity by slightly increasing ridership during off-peak periods. Existing transit service to the site will be able to accommodate these minor increases in transit usage without altering service frequency. Occasionally, shoppers and

employees may be inconvenienced by peak loads on transit associated with special events at the Coliseum Complex.

Shopper Trips

Patrons of value-oriented retail developments generally purchase large items or many items, and thereby, need their own car or truck to transport purchases home. Accordingly, transit use by shoppers at this project is expected to be approximately two percent or less of all patrons.

Maximum PM peak hour increases in ridership on AC Transit Route 98 are estimated at 5-10 passengers. Maximum weekend noon ridership increases on Route 98 are estimated at 10-15 passengers.

Employee Trips

A maximum of 46 project employees would take transit to work, based on an estimated total employment on the project site of 375 (full operation -- both phases), and a current and future work trip transit usage of 12.3 percent for Oakland in general (estimated by the Metropolitan Transportation Commission ("MTC") in 1991). The employees would be accessing the project at various times throughout the day and week depending on their work shifts. The largest impact is likely to be on Saturday and Sunday mornings between 8:00 AM and noon as these are the busiest business hours, when the largest employee work force would be required. Employees whose shifts end after 8:00 PM would not be able to use AC Transit, and therefore, would likely not use transit to get to the site.

Mitigation Measure 4.4-12: None required.

Pedestrian and Bicycle Impacts

Impact 4.4-13: Traffic volumes on Oakport Street plus the turning movements in and out of the project site could create safety concerns for pedestrians and bicycles; however, the project would include sidewalks along the project frontage and improved bicycling facilities on Oakport. (Less than Significant.)

Although future traffic volumes on Oakport Street would increase, the street is proposed for widening as part of the project (see Figure 3.3, Project Site Plan) to accommodate traffic volume increases. In addition to the widening, sidewalks are proposed to be constructed along the project frontage. Further, the project would provide a bicycle lane on Oakport northbound and

an improved bicycle route on Oakport southbound. These improvements would be expected to improve conditions for pedestrian and bicycle movement in the vicinity.

Mitigation Measure 4.4-13: None required.

Impact 4.4-13 Level of Significance with Mitigation: Less than Significant.

Access and On-Site Circulation

Impact 4.4-14: The proposed project would generate several concerns related to on-site circulation, and accessibility of the driveways, including the following: on-site queue lengths for exiting vehicles could impair on-site circulation; turn radii for trucks accessing the loading docks behind Buildings A, B, and C, as shown on the Site Plan, need to be improved; and turning movements at the unsignalized project driveways could degrade internal circulation and affect operations on Oakport Street. (SIGNIFICANT)

Figure 3.3, Project Site Plan, shows three project driveways along Oakport Street and one driveway on Hassler Way. The driveway on Hassler Way would serve the Price-Costco loading area, but could also be used by customers. Along the project driveways on Oakport, there would be potentials for blocking access to and from some aisles of the parking lot when there are queues of vehicles entering or exiting from the site.

In general, aisle widths and turn radii appear adequate for all customer vehicles. Turn radii appear adequate for trucks at the Hassler Way access and at the Price-Costco loading area. Regarding loading for buildings A, B, and C, the turn radii leading to the loading docks at or near the rear of the buildings do not appear adequate for trucks making a 90-degree turn.

Right-turn movements into the northernmost and southernmost project driveways could impede through traffic movement on Oakport Street. In particular, southbound right-turning vehicles at the northernmost driveway could block traffic that could cause a back-up on the bridge. Left-turns from the northernmost driveway could impede movement in both directions on Oakport.

The center (main) project driveway would be signalized at Oakport Street as part of the project. Therefore, there are no expected turning movement problems at this location. Under signalization, this intersection would operate at LOS B with project traffic.

Mitigation Measure 4.4-14: Aisle access shall be redesigned or closed off where appropriate in order to minimize conflicts with queues along the project driveways.

Internal intersections with the project driveways shall be all-way STOP-sign controlled in order to facilitate the movement of circulating (non-queueing) vehicles. One or two parking spaces should be removed at both rear corners of Buildings A and B to provide wider turn radii for trucks accessing the loading docks at the rear of Buildings A, B, and C. The northernmost project driveway shall allow right turns in and out only, in order to minimize conflicts with through traffic on Oakport Street. In addition, 280-foot long deceleration lanes shall be provided on Oakport for all three project driveways on Oakport. (Identified in the EIR.)

Aisle configuration revisions would prevent conflicts by increasing distances from queue lengths and minimizing conflicts between the aisles and the project driveways. Also, all-way STOP-sign controlled internal intersections would maintain flow for circulating (non-queueing) vehicles. Installation of southbound right-turn deceleration lanes at all project driveways on Oakport Street would minimize conflicts with southbound through traffic. To be effective, these deceleration lanes should be approximately 280 feet in length to allow for vehicle stacking prior to entry onto the site. By making the exit from the northernmost driveway right turn only, conflicts with through traffic in both directions on Oakport would be minimized.

Impact 4.4-14 Level of Significance with Mitigation: Less than Significant.

Parking

Impact 4.4-15: Peak project parking demand is estimated to be 1,361 spaces. Since the project proposes to provide 1,296 spaces, there would be a potential shortage of 65 spaces. (SIGNIFICANT)

Analysis was conducted to determine the adequacy of the surface parking proposed as part of the project. The site plan for the proposed project shows 1,296 spaces, including 77 spaces within the BCDC 100-foot jurisdictional zone.

Standard guideline data on parking generation for value-oriented retail shopping is limited. However, it is recognized that this type of use has a proportionally higher demand for parking than a typical shopping center because value-shopping entails buying in bulk, which increases the need for using a motor vehicle to transport the shopping purchases. In addition, the parking turnover rate is slower because shopping and queuing at the cashiers takes longer. Thus, even though the project as proposed would include more parking than the minimum required for general retail uses in the City of Oakland's M-40 zoning district (i.e., one parking space per 400 square feet of retail uses), project parking would be insufficient to accommodate peak demand.

Parking demand projections for the proposed Coliseum Shoreline Price-Costco were developed based on rates obtained from a measured count at the Price Club in the City of Hayward during a Saturday afternoon survey. The survey found a peak parking demand of 6.8 spaces per thousand square feet. Table 4.4.10 applies this rate to the proposed store. The rate for the other value-retail uses proposed on-site is based on the standard rate provided for shopping centers in the ITE publication *Parking Generation*. The average rate for all shopping centers was used instead of the lower rate provided by the fitted equation that is more applicable for a smaller shopping center to allow for increased parking demand during seasonal peaks. The requirements in the table do not account for the possibility that some trips to the Coliseum Shoreline project would also be made to value-retail uses other than Price-Costco on site; however, any reduction of parking demand resulting from multiple store use by visitors to the project site would be offset by extended parking times.

As discussed under the transit impact section, transit use by shoppers to access this value-oriented retail center is expected to be very low, approximately two percent or less of all patrons. Walking to the site will likely be limited to a few employees from nearby office developments.

TABLE 4.4.10: PROJECT PARKING GENERATION

Use	Size (ksf)	Estimated Parking Rate	Peak Demand Parking Spaces
PriceCostco	135.3	6.8	919
Other Value Retail	115.0	3.97	457
TOTAL			1,376
Discount for employee transit use			<u>-15</u>
ADJUSTED TOTAL			1,361

NOTE: ksf equals 1,000 square feet

SOURCE: Korve Engineering, Inc., 1994

The work trip transit usage for employees was estimated at 12.3 percent, which would amount to an estimated maximum of 46 project employees who would take transit to work. This figure does not include employees during the late shifts. The weekend peak shopping hours have the

highest number of employees per shift. To be conservative, it is estimated that about 15 parking spaces would not be needed at any one time by employees who take transit.

Since the project proposes to provide 1,296 spaces, there would be a potential shortage of 65 spaces, including the adjustment for employee transit use. During periods of peak parking demand, alternate (off-site) parking locations would likely be sought by shoppers and/or employees (e.g., along Oakport Street in proximity to the project site). As part of the project, however, Oakport would be widened to provide, in part, deceleration lanes for the project access driveways; parking in these lanes would be prohibited. Parking demand unmet by the on-site parking supply would, therefore, have to park farther away from the project site (e.g., north of 66th Avenue), requiring shoppers to walk longer distances with their purchases. The lack of legal and convenient alternative off-site parking spaces to accommodate the unmet peak parking demand would be a significant impact.

Mitigation Measure 4.4-15: The project sponsors shall provide 65 additional parking spaces for the project. The 65 additional parking spaces can be provided through application of one or more (in combination) of the following measures: restripe the parking lot, perhaps with some compact spaces; revise the parking layout to provide additional spaces on-site; secure parking for employees off-site, perhaps through agreements with neighboring property owners for shared parking; and provide incentives for employees to use public transit or car- and vanpools, while prohibiting employee parking of single-occupancy vehicles on the site. (Identified in the EIR.)

Provision of 65 additional parking spaces would preclude peak parking shortfalls. It should be noted that the parking shortfalls occur very infrequently, and would be associated with those times when project trip generation is at a maximum level.

Impact 4.4-15 Level of Significance with Mitigation: Less than Significant.

Transportation Demand Management

The City of Oakland's Transportation Demand Management ("TDM") program includes requirements of the Bay Area Air Quality Management District. Individual employers who do not meet Oakland's assigned Average Vehicle Ridership may be penalized. In order to meet this standard, it is imperative that employers not only have excellent TDM programs but that they receive high survey response rates to prove compliance.

Customer Trips

Transportation Demand Management measures have had little success reducing big-box and value-oriented retail center auto trips. Developers believe that free parking is needed to attract customers who could go elsewhere. Also, customers do not come everyday, nor at the same time, and do not carpool in significant numbers since their vehicles are used for transporting bulky purchases. The project site is served by transit, but few customers use transit options at this type of retail establishment. Most likely, transit-using visitors will be limited to the elderly, the young, and those without a car.

Employee Trips

TDM measures are most effective when aimed at employees. Applicable TDM measures for retail center employees are flexible work shifts or work hours, car- and vanpooling, transit usage, and cycling.

Work Shifts

Retail center developments inherently practice a TDM measure for their employees. Employees work in shifts, some of which occur outside peak commute hours. While this reduces the peak hour drive-alone auto trips, it does not reduce total drive-alone auto trips. A more recent subset of TDM is "TCM" (Transportation Control Measures), which for air quality reasons aim at reducing the total number of drive-alone trips over the entire day.

Carpooling and Public Transit

For employees who have access to a motorized vehicle, incentives to switch to public transit and carpooling work best for those who have to travel long distances to work. Both modes usually take a longer travel time than driving alone, but over long distances trade-off benefits grow more attractive. There are substantially more savings on cost due to gas and mileage wear and tear, and the reduced stress of having to drive everyday.

A limiting factor with transit use is that it tends to attract those who do not have to change buses. The inconvenience, especially in cold weather, and the waiting time in-between connections is a great hindrance. Commuters perceive waiting time between changes as 2.5 times the actual time. Thus, the number of employees at the site that can be expected to make use of available transit

facilities would be limited to those employees who live close to the bus routes, (and those who do not have a motorized vehicle).

Employees living within five miles would have little incentive to not drive alone. Auto wear and tear for these employees is much less and on-site parking is free. A bus ticket would cost proportionally more for the shorter travel distance, and it would probably take them much less time to drive than to take the neighborhood bus.

Cycling

Some of these employees may trade driving alone for cycling if adequate and safe facilities exist, including continuous designated bike lanes; safe intersection crossings; non-hazardous adjacent traffic speeds; and tamper proof bicycle lockers or racks placed in observable locations for security. Showers at work may also be needed. For trips under five miles in urban conditions, travel time by bicycle can be comparable to driving.

Impact 4.4-16: Development of the project site would result in the loss of the site would result in the loss of the site to spillover parking for Coliseum events.

Currently, whenever there are events at the Coliseum Complex, there are spillover parking impacts due to people parking their vehicles outside of the Coliseum parking lots. Coliseum spillover parking affects the entire vicinity, including the project site. With development of the proposed project, the site will no longer be available for spillover parking use. This impact is considered less than significant because there are other locations both west of I-880 (e.g., on Oakport Street north of 66th Avenue) and east of I-880 (e.g., along Coliseum Way) that could accommodate spillover parking.

Mitigation Measure 4.4-16: None required.

Although no mitigation is required for this less than significant impact, plans are being developed independent of the proposed project to increase parking available at the Coliseum Complex. Plans may include restriping of existing parking areas and identification of additional surface parking sites in the Coliseum vicinity.

Construction

Impact 4.4-17: Potential project construction impacts include truck and employee automobile traffic effects on peak commute travel. (SIGNIFICANT)

It is estimated that the duration of the construction activity would be approximately six months including heavy exterior construction and interior construction. It is anticipated that all construction materials would be stored on-site. The details of the routing of construction vehicles and hence, potential use of local street space, are not available at this stage of the project. However, truck routings would be expected to access the site via I-880, 66th Avenue, and Oakport Street. Existing daily truck volumes on I-880 range between 13 and 16 percent of total average daily traffic. No traffic lanes are expected to be closed during construction. It is anticipated that construction work will be completed on site in stages so that all construction vehicles and facilities can be located in staging areas within the site.

There would be a temporary parking demand by construction workers. The amount of parking demand depends on the stage and level of construction activities.

Mitigation Measure 4.4-17: Construction shall be staged so as to avoid conflict with Coliseum-generated traffic surges. Also, the contractor(s) shall ensure that there is adequate space on-site at all times to accommodate construction employee parking, thereby precluding off-street parking impacts on Coliseum-generated traffic. (Identified in the EIR.)

Parking arrangements on-site would be determined by the contractor and would not be expected to cause conflicts with traffic generated by Coliseum special events. The contractor(s) would be expected to be aware of the timetable for events at the Coliseum Complex and arrange truck activities accordingly.

Impact 4.4-17 Level of Significance with Mitigation: Less than Significant.

NOTES - Traffic, Transportation, Circulation and Parking

- 1 The 22 percent trip reduction factor was derived from a comparison of trip generation for proposed project uses as stand-alone uses and a combined shopping center use. (Institute of Transportation Engineers, *Trip Generation*, 5th Edition, 1991).
- 2 *ITE Journal*, April 1994; Dowling Transportation Engineering, "Traffic Impact Study", 1987.

4.5 GEOLOGY AND SEISMICITY

Information in this section includes data presented in the Preliminary Geotechnical Investigation, Oakport Street Property, by Woodward-Clyde Consultants.¹

SETTING

Regional Context

The project site is a 22.6 acre parcel immediately adjacent to and southeast of Damon Slough along the eastern shore of San Leandro Bay. The site is within the area fringing San Francisco Bay known as the flatlands,² typical of those that have regionally experienced conversion from tidal sloughs and marshlands to urban uses.

Topography

The original topography of the site is estimated to have ranged from zero to 3.5 feet National Geodetic Vertical Datum ("NGVD"),³ based on the presence of salt marsh plant community in 1855.⁴ Historical modifications to the adjacent slough and its banks (levees), placement of fill materials on the site, and installation of drainage culverts have altered both the near-surface sediment composition and topography of the site.⁵ The existing topography of the site is shown on Figure 4.5.1. Elevations on the relatively level parcel range from about 4.7 to 8.4 feet NGVD. The irregular surface includes mounded higher areas in the northwest and southeast corners of the site as shown on this figure. Accordingly, surface runoff from the northern portion of the site drains east towards swales along Oakport Street, while runoff from the southern portion of the site drains to the southwest corner of the site by the railroad embankment and Hassler Way.

Local Geology

Bedrock geology of the Bay Area generally consists of the Franciscan Complex, a mixture of deep marine sedimentary rocks (sandstones, limestones, and radiolarian cherts), volcanic rocks, and metamorphic rocks of variable grade. These rock units range from 65 to 150 million years old, and are found at a depth of approximately 1,000 feet beneath and immediately adjacent to the Bay.⁶

Along the east central side of the Bay, the Franciscan bedrock is overlain by unconsolidated clays, silts, sands and gravels, referred to as the Alameda and San Antonio Formations.⁷ These deposits, which may have been eroded from the East Bay hills, range in thickness from more than 300 feet beneath the Bay to over 1,100 feet in an area that includes the project. These sediments are fairly continuous beneath San Francisco Bay and are referred to as "old bay muds". These muds are often overlain and interlayered with alluvial deposits of fine-grained and clayey Merritt Sand, which are 10 to 50 feet thick on the east side of the Bay.^{8,9} The Merritt Sand is a fine-grained aeolian (wind-blown) sand exposed at the surface across extensive portions of Alameda, and considered to represent a marine beach deposit. In some areas along the east central bay shoreline, the Merritt Sand grades laterally into the Temescal Formation; a unit of poorly-sorted, irregular interlayered alluvial clay, silt, sand, and gravel that may be part of old bay muds.¹⁰

The youngest geologic unit in the region is comprised of estuarine deposits of soft, saturated mud and peat known as the "younger bay mud" that underlies the present shoreline and former marsh areas such as the project site. Younger bay mud consists of a soft, uniform silty clay unit which ranges in thickness up to 130 feet, and may include a lower semi-consolidated member and upper soft member. Regional mapping suggests that the younger bay mud is less than 20 feet thick in the vicinity of the project site.¹¹

Site Conditions

Based on subsurface investigations for two projects immediately southeast and southwest of the project, and subsurface data from the Coliseum Complex east of Interstate 880 ("I-880"), the following subsurface conditions would be expected at the project site:¹²

The site is covered with approximately 9 to 11 feet of silty and sandy clay fill that includes areas of rock and construction debris. The underlying geologic materials would be expected to include a 15 to 25 foot-thick unit of compressible silty clay (the younger bay mud), and interbedded layers of silty clays and dense sands and gravels to depths of at least 110 feet. Groundwater conditions at the site may be influenced by tidal action, and the near-surface groundwater table would be shallow, about 5 to 8 feet below grade.

Soils

The U.S. Department of Agriculture's Soil Conservation Service ("SCS") has mapped the project site as having soils of the Urban land-Baywood complex.¹³ The Urban land-Baywood complex consists of areas with Urban land and Baywood loamy sand soils on mounds and ridges adjacent to beaches, with surface slopes of 2 to 5 percent. Areas mapped as having the Urban land-Baywood complex are about 60 percent urban land, 35 percent Baywood loamy sand, and 5 percent other soils, including drained Laugenour loam, and drained Omni silty clay loam. Also included are small areas of a very deep, loamy sand that is weakly cemented below a depth of 30 inches. The following summarize the characteristics of these surface soils:

- Urban land is a miscellaneous soil mapping unit consisting of land covered by buildings, roads, parking areas, and other structures, with soil material that is heterogeneous fill.
- The Baywood soil is very deep and somewhat excessively drained. It formed in eolian sediment that derived from old beach deposits. Typically, the surface and subsurface layers to a depth of over 60 inches are comprised of loamy sands. Permeability is rapid and the runoff is slow to medium. Soil blowing is a serious hazard if left bare. The soil has few limitations for urban development.
- The Laugenour series consists of very deep, poorly drained soils that formed in recent alluvium from mixed sources on alluvial plains adjacent to streams. Permeability is moderately rapid in the upper soil, and moderately slow below 40 inches. Runoff is slow and there is no erosion hazard. Drainage and flood control improvements typically have lowered the water table to a depth of 40 or 60 inches.
- The Omni silty clay loam, drained is a very deep, poorly drained soil on floodplains in alluvium derived from mixed rock sources. The soil has moderately alkaline silty clay loam and silty clay to a depth of over 60 inches. Permeability is slow, runoff is slow, and the hazard of erosion is slight. Drainage and flood control improvements typically have lowered the water table to a depth of over 60 inches. The main limitations for urban use are low strength and high shrink-swell potential.

Geomorphic Processes

The principal geomorphic processes affecting the project site and its margins are stream and tidal water action along the bank of Damon Slough and settlement of the soils, sediment and fill materials on the project site.

The northern site boundary, along Damon Slough, currently experiences stream and tidal action, including stormwater runoff discharge to San Leandro Bay, and tidal flows from the bay. The site is in a relatively protected location at the interior of the San Leandro Bay, and therefore wave

energy would not be expected to create erosion hazards except during unusually large storm events due to combined flood runoff, storm water and tidal actions, or as a result of a seismic sea wave (tsunami).

Settlement, or subsidence, of the ground surface is a type of geologic process that affects areas containing weak soils, or underlying geologic units, or sediments that are dewatering. It is the densification, and a reduction of pore space, from compaction of unconsolidated material, that may be caused by loading the ground surface with additional sediment or structures or by withdrawing fluid from the ground. Three types of settlement are typical along the San Francisco Bay margin:

- static consolidation settlement of bay muds and artificial fills;
- pile settlement due to building loads; and
- seismically-induced settlement in natural sediments and artificial fill.

Bay muds have moderately low density and are moderately compressible, highly plastic and weak, and can fail due to imposed loads or from differential settlement.¹⁴ Soils developed on fills are also generally weak and compressible, having tendencies to settle over time. Settlement can occur either uniformly or differentially, and may occur slowly or rapidly. Combinations of these processes can result in structural hazards. Static settlement occurs gradually over the life of a structure, with increasing stress over time, and seismic settlement can occur suddenly following an earthquake. Uniform settlement of a building causes the whole structure to change elevation relative to the soil surface, and can cause poor drainage and potential failure of underground utility connections. Differential settlement causes tilting, and can cause mechanical problems within a structure. Seismically-induced settlement that occurs rapidly can result in breakage of pavements, foundations, or utility connections. Typically, structural problems due to settlement can be minimized by structural engineering design and construction techniques based on the estimated settlement susceptibility for a site.

Seismic Activity

Local and Regional Faults

The San Francisco Bay Area is a region of high seismic activity. The San Andreas Fault System, forming the boundary between the North American and Pacific crustal plates, is expressed as a series of major linear faults trending northwest/southeast in a band 50 miles wide.¹⁵ These faults include the Hayward, San Andreas, Rodgers Creek, Green Valley, Calaveras, Concord,

Maacama, and Greenville Faults. Many individual faults of the San Andreas Fault System have produced strong earthquakes in the past and are expected to do so in the future.

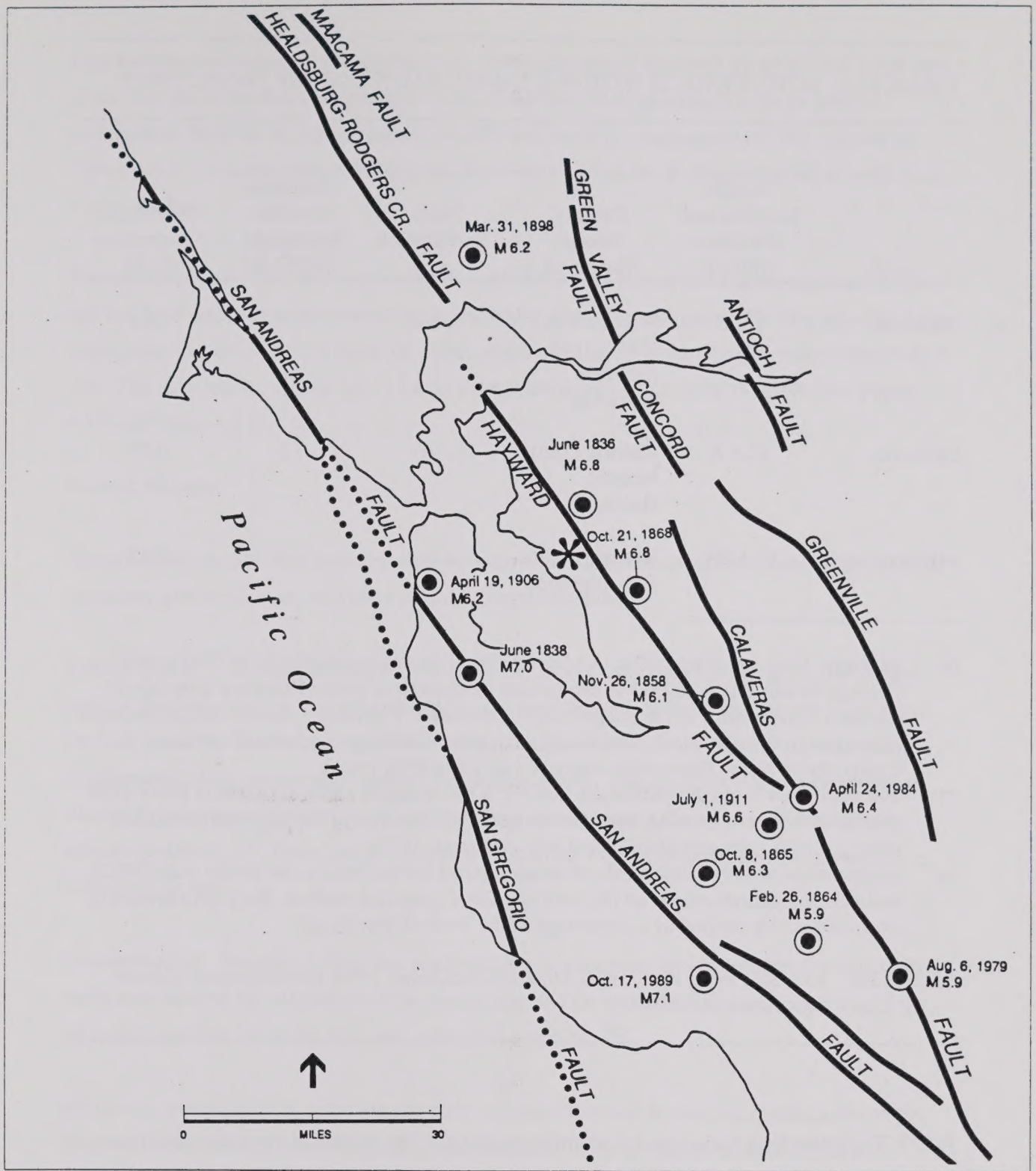
The probability of earthquakes of given magnitude levels in the San Francisco Bay Area has been evaluated by the U.S. Department of Interior's Geological Survey ("USGS").¹⁶ Research indicates that there is a 67 percent chance of one or more large earthquakes occurring in the Bay Area region in the coming 30 years. A Richter Magnitude ("M") 7.0 or larger earthquake along any of the regional faults will have a major impact on the entire Bay Area region. There is a 28 percent probability of a M 7.0 or greater earthquake occurring on the northern segment of the Hayward Fault in the next 30 years.¹⁷ This segment lies immediately east of the project site, and experienced surface rupture in the 1836 earthquake.

As indicated on Figure 4.5.2, about one dozen historic earthquakes of Richter Magnitude 6 or greater have occurred on faults of the San Andreas Fault System with epicenters within 45 miles of the site. The Richter scale magnitude (M)¹⁸ of an earthquake is a quantitative measure of the amount of energy released by an earthquake, but does not necessarily relate directly to hazardous effects at given sites, and can only be determined for those locations equipped with a seismograph.¹⁹

Fault location relative to the project site, status, date of most recent motion, and Maximum Credible Earthquake ("MCE") for the most significant local and regional faults are listed in Table 4.5.1. The MCE is an estimated magnitude for the largest earthquake that appears capable of occurring on a fault, based on empirical relationships between fault length, fault rupture length and historic earthquake magnitudes.

Hayward Fault. The Hayward Fault is the closest active fault. The Hayward Fault is a northwest trending strike-slip fault with right-lateral movement. It is the southern segment of an extensive fracture zone including the Hayward, Rodgers Creek, Healdsburg, and Maacama Faults. The 62-mile long Hayward Fault extends from San Pablo Bay to an obscure convergence with the Calaveras Fault east of San Jose.

Two significant earthquakes have occurred along the Hayward Fault in historic times, an estimated M 6.8 earthquake on June 10, 1836 and a M 6.8 event on October 21, 1868 as shown on Figure 4.5.2. The Hayward Fault has been zoned for special studies under the Alquist-Priolo



* Project Site ● Epicenter

SOURCE: Modified from California Division of Mines and Geology, Special Publication 78, 1987

Coliseum Shoreline / 930397 ■

Figure 4.5.2
Regional Fault Map

TABLE 4.5.1: ACTIVE FAULTS WITHIN A 20-MILE RADIUS OF THE PROJECT SITE

Fault	Nearest Location and Direction (Miles)	Dates of Recent Movement	Fault Classification /a/	Maximum Credible Earthquake (MCE) /b/	Peak Rock Acceleration (g) /c/
Hayward	2.2 E	Pre-Historic (1838; 1868 ruptures) Holocene	Active	7.5	0.6+
Calaveras	12.6 E	Historic (1861 rupture) Holocene	Active	7.5	0.36
San Andreas	13.3 SW	Historic (1906; 1989 ruptures)	Active	8.0	0.41

/a/ Jennings, 1992, and Hart, 1992; An "Active Fault" is defined by the State Mining and Geology Board as one which has had surface displacement within Holocene time (about the last 11,000 years). A fault is generally considered "Potentially Active" for the purposes of evaluation for possible Special Studies Zonation if it shows evidence of surface displacement during Quaternary time (the last 1.6 million years).

/b/ The Maximum Credible Earthquake (MCE), is the strongest earthquake that is likely to be generated along a fault zone, based on the geologic character of the fault and earthquake history. MCE value cited from Mualchin and Jones, 1992.

/c/ Approximate peak bedrock acceleration anticipated for the project site for the stated MCE and closest locations, based on the Seed and Idriss graphical method. Peak acceleration is expressed in this method as a percentage of the force of gravity (g).

SOURCES: Jennings, 1992; Hart, 1992; Mualchin and Jones, 1992; Environmental Science Associates, Inc. 1994.

Act.²⁰ The active fault trace does not cross the project site; the portion of the active fault trace nearest to the project site is located about 2.2 miles east of the site, between the probable epicenters of the 1836 and 1868 earthquakes.

Calaveras Fault. The Calaveras Fault is a major active regional fault approximately parallel to the Hayward Fault, located along the base of Pleasanton Ridge. It is a right-lateral fault, with a

total vertical component of at least 300 feet. Although parts of this fault lie about 12.6 miles east of the site, the more distant southern portions of the fault have generated the large historic earthquakes. Both the M 5.9 earthquake in 1979 and the M 6.1 earthquake of 1984, shown on Figure 4.5.2, produced surface faulting and demonstrated that the fault was capable of producing a large quake.

San Andreas Fault. The San Andreas Fault is the most well-known fault in the regional system, and has been responsible for several large, damaging historic earthquakes. The largest magnitude earthquake was the M 8.3 on April 18, 1906, with an epicenter about 15 miles west of the project site. The most recent was the M 7.1 Loma Prieta earthquake on October 17, 1989 (See Figure 4.5.2 and Table 4.5.1).

Seismic Hazards

The principal categories of potential seismic hazards include surface rupture, groundshaking and secondary ground failures, and other indirect effects (tsunamis).

Surface Rupture. In major earthquakes, fault displacement can cause rupture along the surface trace of the fault, leading to severe damage to any structures or other improvements located on the fault trace. Surface rupture generally occurs along an active fault trace, but occasionally, displacement along presumably inactive faults also occurs. The project site is not located in an Alquist-Priolo Special Studies Zone, as there are no known active faults running through or adjacent to the site.²¹ Therefore, the potential for surface rupture hazards associated with an earthquake is low.

Groundshaking. Seismic shaking at a particular site is a complex function of the distance to the earthquake source, the magnitude of the earthquake and the type, thickness and condition of the geologic materials (bedrock, sediment, soils, fill) at the site.²²

Maximum groundshaking at the site would be expected to result from a large earthquake on the Hayward Fault, but site conditions also make it susceptible to strong groundshaking from earthquakes with epicenters more distant. The estimated peak ground acceleration at the site for an MCE event (Hayward and/or San Andreas Faults) is in the range of 0.5 to 0.6 g (See Table 4.5.1, note c).²³ The peak bedrock acceleration at the site could exceed 0.6g for an M 7.5 event on the closest portion of the Hayward Fault (see Table 4.5.1). The California Division of Mines and Geology earthquake planning scenarios for an M 7.5 on the Hayward Fault,²⁴ and an M 8.3

on the San Andreas Fault²⁵ predict groundshaking intensities in the project vicinity of MM IX or higher, with a high potential for secondary ground failures, notably liquefaction, settlement, and similar effects. The project site has experienced strong groundshaking in the past, exceeding Modified Mercalli intensity V during at least 16 separate earthquakes since the late 1800s (Table 4.5.2).²⁶ The Modified Mercalli ("MM") intensity scale describes impacts on natural features, constructed objects and structures, and human life based on qualitative information, but can be determined for all localities within a region disturbed by an earthquake.²⁷ The MM scale ranges from a low of I (not felt) to a high of XII (total destruction).

The M 7.1 Loma Prieta earthquake of October 17, 1989 was centered about 48 miles south of the project site (see Figure 4.5.2), but produced significant groundshaking and damage at various, distant locations throughout the Bay Area, including several locations in the City of Oakland.^{28,29} The high intensity levels (up to MM IX) in isolated sites distant from the epicenter, has been attributed to amplification of shaking on landfill materials and weak, young sedimentary deposits. Groundshaking intensities in areas underlain by alluvium and bay mud were one to three levels higher than other surrounding locations on different substrates.³⁰ The Loma Prieta earthquake resulted in a number of secondary ground failures including liquefaction, spreading, and sand boils at several widespread locations throughout the Bay Area. Ground shaking in the project vicinity during the 1989 Loma Prieta event was estimated to be an MM level of VI (slight damage, some instances of fallen plaster and damaged chimneys) to MM VII (slight to moderate damage in well-built ordinary structures) (see Table 4.5.2). Various forms of secondary ground failures occurred in portions of Oakland, although no specific effects were reported for the immediate project vicinity. Peak ground acceleration values measured in various areas of Oakland ranged from 0.08g to 0.28g, and were 2 to 3 times greater in selected flat-lying areas than in uplands underlain by bedrock.³¹

The amplification of groundshaking appeared to extend throughout the flat-lying areas, and was not limited to areas of younger bay mud.³² Subsequent evaluation of site stratigraphy for areas of ground amplification indicates that several factors contribute to adverse site response:³³

- Presence and thickness of Holocene-age younger bay mud;
- Presence and thickness of Yerba Buena mud;
- Presence of either/or combinations of the above muds within valleys and former channels, with lenses of accumulations;

TABLE 4.5.2: HISTORICAL GROUNDSHAKING INTENSITIES EXCEEDING MODIFIED MERCALLI V AT THE PROJECT SITE /a/

<u>Date</u>	<u>Year</u>	<u>Groundshaking Intensity/b/</u>
15 February	1856	VI
26 November	1858	VII
4 July	1861	VI
5 March	1864	VI
8 October	1865	VI
21 October	1868	VIII to IX /c/
2 April	1870	VI
31 July	1889	VI to VII /c/
20 June	1897	VI
31 March	1898	VII
3 June	1899	V+
11 June	1903	V to VI /c/
3 August	1903	VI
18 April	1906	VIII to IX /c/
1 July	1911	VI
17 October	1989	VI to VII /c/

/a/ The table presents a summary of estimated past ground shaking intensities experienced at the project site, to illustrate the frequency of moderate to strong groundshaking that has occurred in the area as a result of recorded earthquakes. These data are for earthquakes of varied Richter magnitudes (maximum of 8.3 M for the 18 April 1906 San Andreas event), with epicenters located throughout the San Francisco Bay Area.

/b/ The reported or reconstructed estimate of Modified Mercalli (MM) intensity at the site as published in Topozada and Parke, 1982; Topozada, Real and Parke, 1981; and McNutt and Topozada, 1990.

/c/ A range of Modified Mercalli intensities is given for those events where the project site lies close to a boundary on isoseismal maps of reported intensities (e.g., VI to VII indicates that the project site is near the boundary between zones that reported intensities VI and VII).

SOURCE: Environmental Science Associates, 1994.

- Depth and consistency of other unconsolidated sediments above the local bedrock; and
- Shape of the bedrock basement surface underlying the vicinity.

Secondary Ground Failures. Ground motions induced by earthquakes or aftershocks may cause secondary ground failures. Ground failures are typically caused by soil losing its structural integrity. Types of seismically induced ground failures are liquefaction, lateral spreading and ground lurching. Ground failure phenomena such as sand blows and liquefaction are generally relegated to MM level IX and higher. However, research and observations since the MM scale was developed show that such effects can occur at lower groundshaking intensities depending on a number of physical properties of the surface materials, including water content, permeability, and degree of consolidation.³⁴

Liquefaction is the transformation of a granular material (such as sand) from a solid to a liquid state. Temporary fluid-like behavior of saturated sandy soils typically occurs in areas where groundwater is high.

Lateral spreading is the horizontal movement of loose, unconfined sedimentary and fill deposits. There is some potential for this phenomenon to occur depending on the force of groundshaking and the strength of bay muds.

Lurching is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or unsupported slope faces. Ground moves towards a free face such as a cliff or stream bank in response to earthquake-induced ground shaking, forming irregular ground surface cracks. The potential for lurching is low in the project area because embankments and levees are usually constructed of well-compacted fill. Some displacement or riprap piled up on the bayward face of the perimeter dikes may occur during an earthquake.

Tsunamis. Earthquakes can cause tsunamis ("tidal waves"), seiches (oscillating waves in enclosed water bodies), and landslide splash waves in enclosed water bodies such as lakes, reservoirs, and bays. Tsunamis, upon entering shallow near-shore waters, may reach heights capable of causing widespread damage to coastal areas. A tsunami with a wave height of 20 feet at the Golden Gate is predicted to occur approximately once every 200 years.³⁵

Regulatory and Policy Framework

The goals of the Safety & Seismic Safety Element of the Oakland Comprehensive Plan³⁶ are to minimize the loss of life, injuries, and damage to property; and to recognize natural

environmental hazards in planning for the City's future development. Policies reflecting seismic and geologic hazards applicable to development of the project site include the following:

- In conjunction with other governmental agencies, the City should embark on a program of disseminating available seismic safety information to citizens.
- In conjunction with other governmental agencies, the City should utilize lands subject to severe seismic and geologic hazards for low intensity park and recreational activities or open space.
- The City and other public agencies should not locate public facilities for human occupancy in fault zone areas unless all other available sites are not feasible.
- The City will employ the most current seismic design element in the construction of new public buildings.
- The City should maintain an ongoing program to monitor and refine data on both geologic and seismic hazards.

In addition to these policies, the Oakland City Council also assigns high priority to maintaining and continually updating an Emergency Operations Plan to ensure the City's ability to respond effectively to disaster situations.

The City's Standard Conditions of Approval include numerous measures covering grading and geotechnical concerns, specifying the engineering study, design, reporting, and monitoring requirements.

IMPACTS AND MITIGATION

Significance Criteria

The California Environmental Quality Act ("CEQA") *Guidelines* Section 15065(a) specifies that a lead agency shall find that a project may have a significant effect on the environment when the project "...has possible environmental effects which are individually limited but cumulatively considerable", or where "the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly". Appendix G of the *Guidelines* provides examples of impacts that normally are considered significant, including those that would:

- "cause substantial flooding, erosion, or siltation"; or
- "expose people or structures to geologic hazards".

Appendix I of the CEQA *Guidelines* gives more specific examples of potentially significant geologic impacts. A proposed project may have significant geologic impacts if it results in:

- unstable earth conditions, or changes in geologic substructures;
- disruptions, displacements, compaction, or overcovering of soil;
- change in topography or ground surface relief features;
- the destruction, covering or modification of any unique geological or physical features;
- any increase in wind or water erosion of soils, either on or off the site;
- changes in deposition or erosion of beach sands; or changes in siltation, deposition or erosion which may modify the channel of a river or stream, or the bed of the ocean or any bay, inlet, or lake; or
- exposure of people or property to geologic hazards, such as earthquakes, landslides, mudslides, ground failure, or similar hazards.

Because of specific site conditions, certain of these possible geologic impacts can be ruled as being insignificant. These include changes in topography (the site is virtually flat); landslides (for the same reason); unstable bedrock conditions; and effects on beach sands.

Impact 4.5-1: Construction of buildings, parking areas, and access roadways would create the potential for structural damage over the life of the project resulting from settlement or collapse of weak geologic units and foundation soils. (SIGNIFICANT)

Much of the project area is underlain by fine-grained alluvial and estuarine soils as well as fill. Among the weak geologic units present are younger bay muds, which are plastic, have low shear strength, and are highly compressible. The most significant engineering problems associated with the bay muds are differential settlement or failure due to an imposed load, which may be exacerbated by their tendency to amplify groundshaking associated with earthquakes. Fill materials that have been placed on the site historically have not been engineered during placement, and could be subject to settlement, or have inadequate strength to support the proposed structures.

Based on anticipated subsurface conditions, the preliminary geotechnical investigation recommends that the development would use either driven precast concrete piles or shallow spread footings as foundation alternatives. The concrete piles would derive their support from friction in the stiff to very stiff clayey soils beneath the softer bay mud, and would be

approximately 70 feet long. Anticipated settlement of individual pile caps would be on the order of 0.5 inch, and differential settlement between piles would be negligible. It may also be feasible to support the structure on shallow spread footings in the clayey fill. The total settlement of individual footings would be about 4 to 5 inches and the differential settlements between footings would be about one-half that amount.

If the spread-footing foundation alternative is used, and depending on the nature of the fill at the site, it may be necessary to excavate and recompact several feet of fill below the footings. It is possible that a significant amount of the existing fill would not be acceptable for use and would require disposal and replacement with imported engineered fill, thus adding to construction truck traffic to and from the site.

Mitigation Measure 4.5-1: The project sponsors shall implement all feasible engineering methods to reduce the potential for damage due to soil settlement. A design level, site-specific geotechnical study shall be conducted and specific, recommended technical measures shall be included in the final foundation design. The measures could include re-excavation and compaction of existing on-site soils, removal of weak soils and fill and replacement with imported engineered fill; surcharging and densification; and pile-supported and/or spread-footing foundations. (Identified in the EIR)

As recommended by the preliminary geotechnical investigation, a site-specific geotechnical study, including subsurface boring analysis, shall be employed in the design phase, to select specific technical measures and foundation choices that would reduce the risk of hazards from settlement or collapse of weak geologic units and foundation soils.

Impact 4.5-1 Level of Significance with Mitigation: Less than Significant.

Impact 4.5-2 Construction of the retail complex, including buildings, parking areas, and access roadways, would cause disruption and displacement of soil and the import of fill materials, and would increase the potential for water and wind erosion of graded soil and imported fill during the construction phase activities. (Less than Significant)

The project could require reworking, recompaction and mass grading of the 22.6 acre site, and the import of fill materials. However, the existing topography is nearly level, and the existing soils have low or no erosion hazard. Given the placement of the levee along Damon Slough, and the position of the railroad embankment, and relative elevations compared to the rest of the project site, it is unlikely that the site would generate a substantial amount of sediment that would be transported to off-site receiving waters. In addition, the City's standard Conditions of Approval require the project sponsors to obtain and comply with grading permits that limit

activities to the dry season. The Conditions of Approval also require an approved storm drainage plan, revegetation of graded areas, and preparation and implementation of a construction period erosion control plan. Therefore, the anticipated residual impact would be less-than-significant.

Mitigation Measure 4.5-2: None Required.

Impact 4.5-3: Construction of approximately 250,000 total gross square feet of retail space, parking areas and access roadways would increase the potential danger to employees and customers and risk of damage to structures resulting from the direct and secondary effects of seismic groundshaking. (SIGNIFICANT)

Although no known active faults pass through or immediately adjacent to the project site, strong to very strong groundshaking would be expected on the project site due to a major earthquake on any of the several regional faults. Violent shaking could result from a major event on the nearby Hayward Fault. The proposed retail shopping complex would be constructed in a location with soils and sediments having high natural susceptibility to the effects of groundshaking, and a covering of existing fill of uncertain and heterogenous engineering properties.

Secondary and indirect effects, including liquefaction, differential settlement, lateral spreading, or inundation could result in cracking of pavements, damage to the levee along Damon Slough, or stress on the foundations and structures.

In addition to structural hazards, employees and other persons present on the site could be at risk of injury from non-structural hazards. Non-structural hazards³⁷ are associated with ceilings, windows, office equipment, computers, hazardous materials, files, air conditioners, electrical equipment, and furnishings. Earthquake damage and injuries often occur when heavy objects fall from above, on the interior and exterior portions of buildings.³⁸

The specific risks associated with a potential tsunami inundation are not considered significant since the recurrence level of a tsunami is relatively low (once every 200 years); the effects are transitory; and, because a tsunami would be detected along the coastline before entering San Francisco Bay, there would be ample opportunity for warning and evacuation of potentially threatened areas at the site.

Mitigation Measure 4.5-3: To address potential seismic hazards including groundshaking, the project shall conform to the policies of the Safety & Seismic Safety Element of the Oakland Comprehensive Plan, and shall implement all standard conditions of approval regarding geotechnical issues. (Identified in the EIR)

Both structural and non-structural elements of building designs should be analyzed with seismic safety in mind. The structural safety design criteria should be based on the maximum expected earthquake on the closest active fault, that is, Richter Magnitude M 7.25 on the Hayward Fault. The design and construction of the structures would be in accordance with the requirements of the most recent edition of the Uniform Building Code, Seismic Zone 4, to reduce the potential for structural damage.

As recommended by the preliminary geotechnical investigation, a site-specific geotechnical study, including subsurface boring analysis, should be employed in the design phase, to select specific technical measures and foundation choices that would reduce the risk of hazards from groundshaking and secondary ground failures. The geotechnical study shall include an evaluation of the integrity and stability of the existing Damon Slough levee, and recommend any remedial measures needed to provide adequate protection from seismic shaking impacts to the levee. Adequate levee improvements or repairs, if needed, shall be implemented prior to occupancy of the proposed structures.

Impact 4.5-3 Level of Significance with Mitigation: Less than Significant.

NOTES - Geology and Seismicity

- 1 Woodward-Clyde Consultants, *Preliminary Geotechnical Investigation, Oakport Street Property Oakland, California*, prepared for the City of Oakland, Environmental Affairs Division, June 22, 1993. The geotechnical investigation was conducted to identify and evaluate geologic and soil conditions at the site and present possible alternative foundation concepts and cost estimates for the proposed development. The study was not intended to provide design-level geotechnical data or recommendations, and no drilling, sampling or laboratory testing of subsurface conditions at the site was included.
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- 3 National Geodetic Vertical Datum (NGVD) corresponds to mean sea level in 1929.
- 4 See Section 4.10, Biological Resources, Figure 4.10.1.
- 5 See Section 4.10 for further discussion of the site-specific fill history.
- 6 Goldman, H.B. *Geology of San Francisco Bay*, pp. 11-29 In Goldman, H.B. (ed.) *Geology and Engineering Aspects of San Francisco Bay Fill*, DMG Special Report 97, 1969.
- 7 Lawson, A.C., San Francisco, California, USGS Geological Atlas, Folio 193, 1914.
- 8 *Ibid.*
- 9 Goldman, *supra n.6.*
- 10 Shakal, A.F., M.J., Delisle, M.S., Reichle, and R.B. Darragh, "Strong Ground Shaking from the Loma Prieta Earthquake of 17 October 1989, and Its Relation to Near Surface Geology in the Oakland Area," in *The Loma Prieta (Santa Cruz Mountains), California, Earthquake of 17 October 1989*, California Department of Conservation, Division of Mines and Geology, Special Publication 104, 1990.
- 11 Goldman, *supra n.6.*
- 12 Woodward-Clyde Consultants, *supra n.1.*
- 13 USDA Soil Conservation Service, *Soil Survey of Alameda County, California - Western Part*, United States Department of Agriculture, Soil Conservation Service, in cooperation with the University of California Agricultural Experiment Station, 1981.
- 14 Goldman, *supra n.6.*
- 15 Jennings, C.W., *Preliminary Fault Activity Map of California*, California Department of Conservation, Division of Mines and Geology, Open-File Report 92-03, 1992.

- 16 The earthquake *magnitude* is a measure of the strength of an earthquake or the strain energy released at the source (focus) of the earthquake. It is determined by seismographic observation of wave amplitude. The magnitude is expressed as a value on the Richter scale, developed by Charles F. Richter in 1935. The Richter scale measures the magnitude (M) of an earthquake on a logarithmic scale, using the largest ground motion recorded on a standard seismograph at a distance of 100 kilometers from the epicenter (location on the earth's surface directly above the focus). Each incremental (1.0) increase in the Richter magnitude is equal to a 10-fold increase in the ground wave amplitude and an approximately 32-fold increase in energy release (Bolt, 1988).
- 17 Plafker, G. and J.P. Galloway (eds.) *Lessons Learned from the Loma Prieta, California, Earthquake of October 17, 1989*, USGS Circular 1045, 1989.
- 18 USGS Working Group on California Earthquake Probabilities, Probabilities of Large Earthquakes in the San Francisco Bay Region, California. USGS Circular no. 1053, 1990.
- 19 *Ibid.*
- 20 California Division of Mines and Geology, *Alquist-Priolo Special Studies Zone Map, Oakland East 7.5' Quadrangle*, January 1982.
- 21 E.W. Hart, *Fault-Rupture Hazard Zones in California: Alquist-Priolo Special Studies Zones Act of 1972*, with index to Special Studies Zones Maps, DMG Special Publication 42, revised 1992.
- 22 Plafker, G., and J.P. Galloway, *supra n.17*.
- 23 Mualchin, L. and A.L. Jones, *Peak Acceleration from Maximum Credible Earthquakes in California (Rock and Stiff Soil Sites)*, prepared for internal use by Caltrans, DMG Open-File Report 92-1, 1992.
- 24 Steinbrugge, K.V. , J.H. Bennett, H.J. Lagorio, J.F. Davis, G. Borchardt, and T.R. Topozada, *Earthquake Planning Scenario for a Magnitude 7.5 Earthquake on the Hayward Fault in the San Francisco Bay Area*, DMG Special Publication 78, 1987.
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- 26 Topozada, T.R., C.R. Real, and D.L. Parke, *Preparation of Iseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes*, DMG Open-File Report 81-11, 1981; Topozada, T.R., and D.L. Parke, *Areas Damaged by California Earthquakes, 1900-1949*, DMG Open-File Report 82-17, 1982; McNutt, S.R., and T.R. Topozada, "Seismological Aspects of the 17 October 1989 Earthquake," in *The Loma Prieta (Santa Cruz Mountains), California, Earthquake of 17 October 1989*, California Department of Conservation, Division of Mines and Geology, Special Publication 104, 1990.
- 27 Plafker, G., and J. P. Galloway, *supra n.17*.

- 28 Borchardt, G., "Liquefaction and Shaking Damage in the Watsonville and Oakland Areas and its Implications for Earthquake Planning Scenarios," pp. 83-104 in J.E. Baldwin and N. Sitar (eds.), *Loma Prieta Earthquake: Engineering Geologic Perspectives*, Association of Engineering Geologists, Special Publications No. 1, 1991.
- 29 Rogers, J.D., and S.H. Figuers, Site Stratigraphy and Near-Shore Development Effects on Soil Amplification in the Greater Oakland Area, pp. 123-150 in J.E. Baldwin and N. Sitar (eds.), *Loma Prieta Earthquake: Engineering Geologic Perspectives*, Association of Engineering Geologists, Special Publications No. 1, 1991.
- 30 Plafker, G., and J.P. Galloway, *supra n.17*.
- 31 *Ibid.*
- 32 *Ibid.*
- 33 Rogers, J.D., and S.H. Figuers, *supra n.29*.
- 34 Plafker, G., and J.P. Galloway, *supra n.17*.
- 35 Ritter, J.W., and W.R. Dupre, *Map Showing Areas of Partial Inundation by Tsunamis in San Francisco Bay Region, California*, San Francisco Bay Region Environment and Resources Planning Study, USGS, Basic Data Contribution 52 , 1972.
- 36 City of Oakland, *Oakland Policy Plan, Safety & Seismic Safety Element*, adopted October 24, 1972; amended through September, 1980.
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4.6 HAZARDOUS MATERIALS

This section discusses the potential presence of hazardous substances at the project site due to previous land uses and the importing of fill material from off-site sources. Major regulations pertaining to hazardous materials are presented and the potential for hazardous materials to impact the project site is evaluated. Mitigation measures are proposed for any impacts identified.

The evaluation of the potential presence of hazardous materials is based on the following information: (1) review of existing site history and site investigation reports; (2) a computerized records search to identify potential hazardous waste sites within 2,000 feet of the proposed project;¹ (3) review of local agency files to characterize the sites identified by the computerized records search; and (4) a visual site reconnaissance.²

SETTING

Hazardous Materials Regulation

Hazardous materials and hazardous wastes are extensively regulated by federal, state, regional, and local regulations, with the major objective of protecting public health and the environment. In general, these regulations provide definitions of hazardous substances; establish reporting requirements; set guidelines for handling, storage, transport, remediation and disposal of hazardous wastes; and, require health and safety provisions for both workers and the public. Regulatory agencies also maintain lists, or databases, of sites that are classified as hazardous waste generators or that store hazardous substances in underground storage tanks as well as sites where soil or groundwater quality may have been affected by hazardous substances.

The major agencies enforcing these regulations include: the U.S. Environmental Protection Agency (federal); the Department of Toxic Substances Control and the California Regional Water Quality Control Board of the California Environmental Protection Agency (state); the Bay Area Air Quality Management District (regional); the Alameda County Environmental Health Services Agency, Department of Environmental Health (local); and the Oakland Fire Department (local). A description of the major hazardous materials regulations and the agencies implementing them is on file and available at the City.

Site History

Specific information relating to the site history was obtained from a Phase I report prepared for the Port of Oakland.³ The site was once a saltwater marsh; a dike was constructed and the site was subsequently drained sometime before 1930. In 1945, the Port of Oakland purchased the site from the East Bay Municipal Utility District. Between 1947 and 1968 the site was filled with dredge spoils, construction debris, asphalt concrete, base rock from road repairs, bricks, mortar and occasional loads of foundry waste which consisted primarily of sand.

There was a brick cleaning operation located on the northwestern corner of the property during the 1960s. The process used for this operation consisted of mechanically cleaning mortar off used bricks. In the late 1960s, the Port of Oakland constructed railroad tracks along the western property boundary to service adjacent businesses. Over the last 10 years, the site has been used for purposes such as carnivals and Christmas tree sales. It has also occasionally been used for overflow parking for events at the Coliseum complex.

Soil Quality

Evaluation of the soil quality at the site is based on an investigation conducted in 1990.⁴ Based on this investigation, the thickness of fill ranges from four and one-half feet to more than seven feet below ground surface. The fill is underlain by bay mud, a naturally occurring deposit of silt and clay materials along the bay margin. The fill materials are suspected to contain petroleum hydrocarbons, halogenated volatile organic compounds and polynuclear aromatic hydrocarbons (PNAs). The PNAs could be present in the foundry wastes from incomplete combustion of fuel or asphaltic products. Based on other sampling conducted in Oakland by Baseline, the presence of PNAs is also associated with halogenated volatile organic compounds because the foundry wastes were derived from industrial processes which may have used halogenated volatile organic compounds.⁵

During the 1990 investigation of the on-site fill, 48 soil borings were drilled to the water table at approximately five to seven feet below ground surface to evaluate soil quality. Sixty-three samples of the fill from these soil borings were analyzed for halogenated volatile organic compounds; total petroleum hydrocarbons such as diesel, kerosene, and motor oil; and Title 22 metals. One soil sample (from Boring MW-OP2, two foot depth) was analyzed for PNAs because cuttings from the boring contained asphalt pieces.

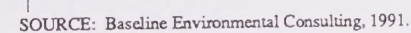
PNAs and halogenated volatile hydrocarbons were not identified in any of the soil samples analyzed for those parameters. Total lead concentrations ranged from three to 1,700 milligrams per kilogram and soluble lead levels measured using a waste extraction test ranged from 0.83 to 190 milligrams per liter. Some of the total lead concentrations exceeded the Total Threshold Limit Concentration ("TTLC") of 1,000 milligrams per kilogram and some of the soluble lead concentrations exceeded the Soluble Threshold Limit Concentration ("STLC") of 5.0 milligram per liter in soil samples from Borings C, D, O and P as well as in samples from subsequent borings drilled to evaluate the extent of lead in the soil in the vicinity of these borings.⁶ Boring locations are shown on Figure 4.6.1. These levels of total and soluble lead will require disposal of the fill materials as a hazardous waste if they are excavated.

Based on this sampling, the horizontal extent of lead in the soil was well characterized. The vertical extent has not been characterized at Borings C, O and P. The lowermost sample from these borings contained total lead in excess of the TTLC or soluble lead in excess of the STLC. It is estimated that a total of 165 cubic yards of soil would require excavation.⁷

Sediment Quality

Evaluation of the sediment quality at the site is based on an investigation conducted in 1993.⁸ During this investigation, surface soil and sediment sampling was conducted to evaluate surface soil quality and to evaluate whether surface runoff is affecting sediment quality in Damon Slough and Damon Marsh, which is located at the mouth of the slough in San Leandro Bay. Sample locations are shown on Figure 4.6.1. Soil and sediment samples were analyzed for Title 22 metals. Seven surface soil samples were obtained from the site; none of the total metals concentrations identified in these samples exceeded TTLC or ten times the STLC.⁹

Sediment sampling included three samples from Damon Slough, upstream of the project site; five samples from the site or adjacent to it; three samples from Damon Slough, downstream of the site; and one sample from Arrowhead Marsh, which is located in San Leandro Bay west of the mouth of Damon Slough. None of the metals exceeded the TTLC. Although the total lead level identified in some of the sediment samples exceeded ten times the STLC, the levels identified in the site sediments were similar to those identified in the sediments from Damon Slough and Damon Marsh, and from Arrowhead Marsh, including the upstream samples.



Groundwater Occurrence and Quality

Evaluation of groundwater occurrence and quality is based on the investigation conducted in 1990.¹⁰ This investigation included the installation and sampling of three groundwater monitoring wells in the locations shown on Figure 4.6.1. Based on this investigation, the depth to groundwater is approximately five to seven feet below ground surface and the estimated groundwater flow is towards the north to northeast; this flow direction is estimated because the locations of the groundwater monitoring wells have not been surveyed.

In August 1990 a groundwater sample from each well was analyzed for halogenated volatile organic compounds; aromatic volatile organic compounds; total petroleum hydrocarbons as diesel, kerosene, and motor oil; and Title 22 metals. No organic compounds were identified in the groundwater samples. Barium, copper, nickel, thallium and zinc were identified but the levels did not exceed Maximum Contaminant Levels for drinking water. The wells have not been sampled since 1990.¹¹

Remediation Plans

As part of the terms of the sale of the property to the City, the Port of Oakland has agreed to clean up soil containing elevated lead levels (total lead levels greater than TTLC and soluble lead levels greater than STLC) in accordance with applicable laws. The Port of Oakland has indicated that the site remediation program would include excavation to remove soil containing metals at levels above the STLC and TTLC criteria, followed by appropriate disposal of the soil and backfilling with clean soil.¹² Confirmation soil samples will be collected to document complete removal of soil containing elevated lead levels.¹³ If confirmation sampling indicates that additional excavation is required in the vicinity of Borings C, O and P, it will be performed during the remediation.¹⁴

Regulatory Agency Involvement

Based on the levels of lead identified in the soil during the 1990 investigation, the Port of Oakland submitted a Notification of Hazardous Waste Site form to the U.S. Environmental Protection Agency ("EPA") in June 1991.¹⁵ On the basis of the notification, the project site was added to the Comprehensive Environmental Response, Compensation, and Liability Information System ("CERCLIS") on June 17, 1991.¹⁶ An expanded site inspection of the site was conducted in 1993 to evaluate the site for further action by the U.S. EPA.¹⁷ The site inspection included

review of previous work that had been conducted at the site to evaluate the potential for releases of hazardous substances from the site. On the basis of this review, the site does not qualify for further assessment by the U.S. EPA.¹⁸

The San Francisco Bay Regional Water Quality Control Board, California Department of Toxic Substances Control, and Alameda County have not been actively involved in the investigations of the proposed project site.¹⁹ Previous reports and remediation plans for the project site have not been submitted to these regulatory agencies for review.²⁰

Summary of Site Conditions

Elevated lead levels have been identified in the soil at the project site. Sampling has been performed to characterize the horizontal extent of lead but the vertical extent has not been fully characterized. A remediation plan has been developed and will be implemented by the Port to remove soil containing elevated lead levels, including the areas where the vertical extent has not been characterized. Groundwater quality at the project site appears to meet drinking water standards for the organic compounds and metals analyzed.

Potential Off-Site Sources of Chemicals

Regulatory agency lists were reviewed to identify sites that are associated with hazardous materials use or contamination within a 2,000 foot radius of the project site. These include sites with permitted underground storage tanks and sites permitted for the storage of hazardous materials, as well as sites where soil or groundwater quality may have been affected by hazardous substances. A discussion of the regulatory databases used to identify these sites is on file and available at the City. In addition, soil borings were installed and surface soil samples were collected at the Edgewater parcel (Figure 4.6.1) as part of a property assessment conducted for the Port of Oakland.²¹ The results of this investigation were reviewed to assess potential impacts from the parcel on the project site. If groundwater quality has been degraded at any of these sites, it could potentially affect subsurface conditions at the project site because groundwater plumes can migrate relatively long distances and affect adjacent and nearby land uses.

The record search identified 21 sites with permitted underground storage tanks or that are permitted to generate hazardous wastes under the Resource Conservation and Recovery Act implemented by the U.S. EPA. These sites are listed in Table 4.6.1 and each site location is

TABLE 4.6.1: SITES WITH PERMITTED UNDERGROUND STORAGE TANKS AND PERMITTED BY RCRA TO GENERATE HAZARDOUS WASTES

Map No.	Site Name	Site Address	RCRA	UST
1	Cruise America	796 66th Avenue		x
2	Malibu Fun Center Castle	8010 S. Coliseum Way		x
3	GMC Truck Center	8099 S. Coliseum Way		x
4	City of Oakland	7101 Edgewater Drive	x	x
5	Grand Auto Warehouse	7200 Edgewater Drive	x	
6	General Automotive	7200 Edgewater Drive		x
7	Pacific Bell	7300 Edgewater Drive	x	
8	Ada Signal Processors, Inc.	7303 D Edgewater Drive	x	
9	Tab Label Company	7305 Edgewater Drive	x	
10	United Plastics Corporation	513 Independent Road	x	
11	Acme Fixture Company, Inc.	711 Independent Road	x	
12	Mauk Sheet Metal Works	755 Independent Road		x
13	Western Union Corp.	732 Kevin Court		x
14	Pacific Bell	733 Kevin Court	x	
15	Ronald L. Day Transportation	733 Kevin Court	x	x
16	Star Roofing Co.	740 Kevin Court		x
17	Sun Roofing Co.	745 Kevin Court		x
18	Sherwin Williams	754 Kevin Court	x	
19	Oakland Athletics Baseball	Oakland Alameda County Coliseum	x	
20	Murphy's Inc, Tire Engineer	7727 Oakport Street		x
21	Novacor Medical Corp.	7799 Pardee Lane	x	

Notes:

RCRA = Resource Conservation and Recovery Act, "X" in this column indicates that the site is permitted to store hazardous wastes under RCRA.

UST = Underground Storage Tank, "X" in this column indicates that the site has at least one UST permitted by the State of California.

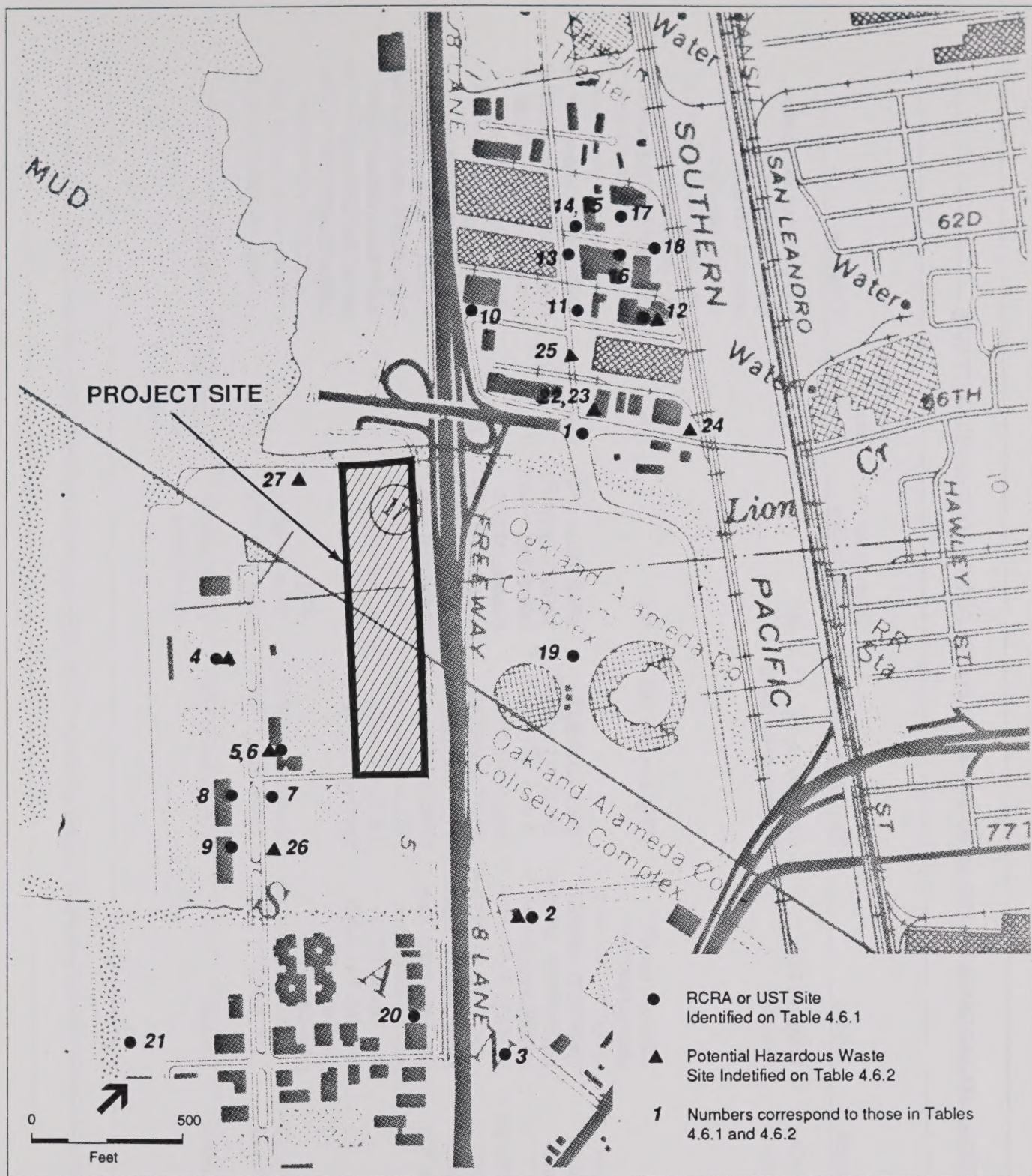
Source: Orion Environmental Associates; NATEC Environmental Reporting Service March 14, 1994; Alameda County Health Care Services Agency Site Brief for Underground Tanks September 10, 1993.

shown on Figure 4.6.2. Underground storage tanks, in particular the older tanks, are common sources of soil and groundwater contamination. Underground storage tanks have been used in a variety of industries for the storage of gasoline, diesel, chemicals, waste oil and other chemicals. Prior to regulation in the 1980s, underground storage tanks were not subject to monitoring or provided with secondary containment. If a tank leaked, the contents would migrate to the soil, and if undetected, could also contaminate the groundwater. Current requirements for underground storage tanks include tightness testing on a regular basis to monitor for leakage. The presence of a permitted underground storage tank at a site does not necessarily imply that soil or groundwater contamination is present, only that there is such a potential. Similarly, identification of a site that is permitted to store hazardous substances only indicates the potential for hazardous substances to be present; it does not necessarily indicate that there is an environmental problem.

The record search identified ten sites where hazardous substances were known or suspected to have resulted in the presence of non-native compounds in the soil or groundwater. These sites are listed in Table 4.6.2 and the location of each site is shown on Figure 4.6.2. Agency files for these sites were reviewed to assess possible effects on the subsurface conditions at the project site from off-site sources of hazardous materials. Alameda County Environmental Health Care Services Agency, Department of Environmental Health, oversees remediation of contaminated soil and groundwater in coordination with Cal EPA. Five of the sites that occurred on the regulatory lists are in the Alameda County oversight program. The San Francisco Bay Regional Water Quality Control Board provides oversight for the remainder of the sites. In addition, Allied Crane Maintenance, located at 727 66th Avenue is identified in the CERCLIS database; the U. S. EPA provides oversight for sites within the CERCLIS database.

Based on the information obtained from the file reviews, each of the sites identified was evaluated for its potential to affect groundwater quality at the project site as shown in Table 4.6.2. The Grand Auto Distribution Center and the City of Oakland Consolidated Services Center are the only sites that are considered to have a potential to affect the project site. The remainder of the sites included in Table 4.6.2 are considered to have a low potential for affecting the project site either because contamination at the site is limited or because of their distance from the project site.

The Grand Auto Distribution Center is located adjacent to the western property boundary of the project site. Petroleum related compounds, polychlorinated biphenyls (Aroclor 1254) and lead related to previous underground storage tanks and hydraulic hoists have been identified in the



SOURCE: Environmental Science Associates

Coliseum Shoreline / 930397 ■

Figure 4.6.2
Potential Hazardous Waste Site
in Project Vicinity

TABLE 4.6.2: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROPOSED PROJECT SITE

Map No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
22	Peck and Hills Co. 701 66th Avenue	1,000 gal. UST removed.	TPHg: 56 mg/kg Benzene: 0.035 mg/kg	NA	Low	Soil exhibiting hydrocarbon vapors and odors was removed, TPHg and BTEX were not identified in subsequent samples from the UST excavation.
23	Allied Crane Maintenance 727 66th Avenue	2,000 gal. gas UST removed 6/6/90.	TPHg, Benzene: ND	NA	Low	Soil clean upon UST removal.
24	McGuire & Hester 796 66th Avenue	Three USTs removed 1/87. Improper waste handling.	TPH: >1,000 mg/kg	TPHg: ND TPHd: 3.7 mg/l O & G: ND Benzene: ND	Low	Soil removal conducted. Potential to impact project site is low due to distance from site and location across Damon Channel.
25	Schwartz Property 6345 Coliseum Way	Broken pipeline leaked diesel into storm drain; product observed on bay. Asphalt USTs removed. Two 3,000 gal. diesel USTs removed 11/9/93.	TPHg: 320 mg/kg TPHd: 4,300 mg/kg TPHmo: 1,400 mg/kg O & G: 490 mg/kg Benzene: 3 mg/kg	TPHg: ND TPHd: 42.0 mg/l TPHmo: 31.0 mg/l Benzene: ND	Low	Further characterization required by ACDEH 2/2/94. Potential to impact project site is low due to distance from site and location across Damon Channel.

TABLE 4.6.2: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROPOSED PROJECT SITE (CONTINUED)

Map No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
2	Malibu Grand Prix 8000 Coliseum Way	Two 6,000 gal. USTs removed 3/29/89 and 2/1/90.	TPHg: 3200 mg/kg Benzene: 660 mg/kg	TPHg: 1.5 mg/l Benzene: 0.0032 mg/l	Low	Further site characterization required by ACDEH in June 1992. Groundwater plume potentially migrating off-site. Potential to impact project site is low due to distance from site and reported groundwater flow direction toward west at Malibu Grand Prix.
4	City of Oakland 7101 Edgewater Drive	Chemicals identified in soil and groundwater during geotechnical investigation. Pipelines, sumps and existing USTs are considered potential sources.	TPHg: 830 mg/kg TPHd: 280 mg/kg O & G: 1800 mg/kg Benzene: 2.6 mg/kg SOCs: 7.9 mg/kg	TPHg: 16.0 mg/l TPHd: 1.9 mg/l Benzene: 1.8 mg/l SOCs: 0.070 mg/l Lead: 0.173 mg/l	Possible	File notes indicate free product was observed in excavation during installation of new USTs in 1984. Affect of tidal action on groundwater flow directions has not been assessed. Site has not been fully characterized.

TABLE 4.6.2: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROPOSED PROJECT SITE (CONTINUED)

Map No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
5	Grand Auto Distribution Center 7200 Edgewater Drive	Two 1,000 gal. and one 500 gal. UST removed in 8/87. 50 gallon hydraulic oil release identified in 2/91; two hydraulic hoists removed 6/91.	TPHg: 23 mg/kg TPHd: 330 mg/kg O & G: 2,600 mg/kg Benzene: ND SOCs: 14.5 mg/kg Aroclor 1254: 0.039 mg/kg Lead: 580 mg/kg	TPHg: ND TPHd: 1.0 mg/l Benzene: ND Chlorobenzene: 0.004 mg/l SOC: ND	Possible	Former UST locations adjacent to proposed project. ACDEH has required additional site characterization and continued quarterly monitoring of groundwater monitoring wells. Wells adjacent to proposed project are clean; monitoring of these would identify potential groundwater quality degradation at the project site.
26	Hooton Property 7307 Edgewater Drive	3,000 gal. unleaded gas UST removed 6/23/88.	TPHd: 95 mg/kg Oil: 47 mg/kg	TPHd: ND TEPH: ND Benzene: ND	Low	No further action recommended by consultant. Notes by RWQCB indicate no further action is proposed.
12	Mauk Sheet Metal 755 Independent Road	550 gal. unleaded gas UST removed 5/6/92.	TPHg: 8.3 mg/kg Benzene: ND	TPHg: 22 mg/l Benzene: 0.038 mg/l	Low	Work plan submitted for groundwater assessment 3/25/94. Potential to impact project site is low due to distance from site and location across Damon Channel.

TABLE 4.6.2: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROPOSED PROJECT SITE (CONTINUED)

Map No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
27	Edgewater Property	Property assessment conducted.	Lead: 520 mg/kg PAH: 0.895 mg/kg	NA	Low	Reports prepared for City Consolidated Services Center indicates groundwater monitoring wells were installed on property but analytical results are not available in agency files.

Abbreviations:

ACDEH = Alameda Health Care Services Agency, Department of Environmental Health

BTEX = Benzene, toluene, ethylbenzene and xylenes

mg/kg = milligrams per kilogram, equivalent to parts per million

mg/l = milligrams per liter, approximately equivalent to parts per million

NA = Groundwater quality was not assessed

ND = Constituent was not detected in sample

O & G = Oil and grease

PAH = Polynuclear aromatic hydrocarbons

SOCs = Semivolatile organic compounds

TEPH = Total extractable petroleum hydrocarbons

TPH = Total petroleum hydrocarbons, type not specified

TPHd = Total petroleum hydrocarbons identified as diesel

TPHg = Total petroleum hydrocarbons identified as gasoline

TPHmo = Total petroleum hydrocarbons identified as motor oil

UST = Underground storage tank

Source: Orion Environmental Associates, 1994. Based on file review information obtained from ACDEH on April 6, 1994 and from RWQCB on April 26, 1994.

soil and groundwater at the site; however, these compounds have not been identified in groundwater from the monitoring wells located adjacent to the project site, indicating that groundwater quality at the project site has not been affected. The reported groundwater flow is northerly. Potential tidal effects on the groundwater flow directions could periodically cause groundwater to flow towards the project site. This potential effect has not been evaluated.

The City of Oakland Consolidated Services Center is located across Edgewater Drive to the west of the Grand Auto Distribution Center. Petroleum-related compounds, semivolatile organic compounds, and lead have been identified in soil or groundwater at the site. The extent of these chemicals has not been evaluated. Groundwater flow directions have not been evaluated at the site, and the direction may also be affected by tidal action.

IMPACTS AND MITIGATION

Significance Criteria

Public health impacts would be considered significant, based on CEQA Guidelines, if they create a potential public health hazard or involve the use, production or disposal of materials or wastes which pose a hazard to people, animal or plant populations in the affected area. An impact would also be considered significant if it would interfere with emergency response plans or emergency evacuation plans.

Definition, identification and determination of threshold levels of hazardous materials and wastes are provided in the Title 40 of the Code of Federal Regulations ("40 CFR") and in Title 22 of the California Code of Regulations. In accordance with these regulations, a hazardous waste is a substance or combination of substances that, because of its quantity, concentration or physical, chemical or infectious characteristics, may pose a substantial threat or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed. Determination of "substantial" hazard or "insignificant" levels of hazardous materials is performed by the regulatory agencies on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

Impact 4.6-1: During construction of the proposed project, there is the potential to encounter hazardous wastes in the soil and there is the associated potential for exposure of workers and the community to hazardous substances because there are hazardous wastes known to be present at the project site. (SIGNIFICANT)

Fill materials present at the site contain lead at concentrations greater than the TTLC and STLC, which are criteria used by the State of California to classify hazardous wastes. In accordance with the terms of the sale of the project site, the Port of Oakland will clean up the soil at the site in a manner consistent with the remediation provided in the 1990 report. Remediation would typically include an assessment of the type of chemicals encountered, characterization of the extent of affected soil and/or groundwater, methods that are planned to remediate the site, and sampling that will be conducted to demonstrate appropriate remediation of the affected soil and/or groundwater.

According to the Port of Oakland, a remediation plan for the site would include removal of soil that would be considered a hazardous waste, off-site disposal of the excavated soil and confirmation sampling to demonstrate adequate removal of the soil. Appropriate regulatory agencies (e.g., Alameda County) will be notified of the remediation efforts prior to implementation. A report documenting confirmation sampling will be submitted to the County subsequently.

During remediation, implementation of legally required health and safety plans would minimize the potential exposure of workers and the public to hazardous substances. Typically, health and safety plans include identification of the chemicals present, potential health and safety hazards, monitoring to be performed during site activities, identification of appropriate personal protection equipment and emergency response procedures. Once remediated, the potential to encounter contaminated soils or groundwater during construction would be low, and the potential for future exposure of workers and the community to hazardous materials would be minimal.

Mitigation Measure 4.6-1: A remediation plan shall be developed for the project site. The Alameda County Health Care Services Agency, Department of Environmental Health, shall be advised of (1) the nature and extent of hazardous wastes known to be present at the site, and (2) the method by which such hazardous wastes will be removed, transported, and disposed of. If the County requests, or if otherwise required by law, the remediation plan shall be submitted to the County for review and approval, prior to implementation of the site remediation. The County may direct whether other State regulatory agencies should become involved. The remediation plan shall be implemented and adequate removal of soil shall be documented in a report to the agencies after any legally required regulatory approvals have been obtained. (Identified in the EIR.)

Impact 4.6-1 Level of Significance with Mitigation: Less than Significant.

Impact 4.6-2: During construction of the proposed project, there is the potential to encounter previously unidentified hazardous substances at the project site. (Less than Significant)

Previously unidentified hazardous substances could be present at the site resulting from migration of groundwater plumes from off-site sources, or from on-site sources that have not been previously identified or characterized. The potential for this is low based on the results of the 1990 Phase I assessment and subsequent site investigations conducted for the property, as well as the review of potential off-site sources within 2,000 feet of the project site.

If previously unidentified hazardous substances are identified during construction of the proposed project, exposure of workers and the community to hazardous materials could occur through inhalation of vapors or fumes, through dermal contact with contaminated materials, or through direct or indirect ingestion of contaminated dust. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered and the management of these substances. Sampling would be necessary to identify the hazardous substances present and it would be necessary to notify the regulatory agencies.

Identification of hazardous substances at the site would require preparation of a remediation plan and health and safety plan as described above to reduce the potential for exposure of workers and the public to hazardous substances. The remediation plan would typically include an assessment of the type of chemicals encountered, characterization of the extent of affected soil/and or groundwater, methods that are planned to remediate the site, and sampling that will be conducted to demonstrate appropriate remediation of the affected soil and/or groundwater. The health and safety plan would include the information described above for Impact 4.6-1.

Mitigation Measure 4.6-2: In the event that previously unidentified hazardous substances are encountered during construction, contractors shall be alerted for visible evidence of hazardous materials, such as soil discoloration, suspicious odors, or presence of underground tanks, piping or other buried building materials. The contractor shall have a contingency plan for sampling and analysis of potentially hazardous substances and coordination with the regulatory agencies. If hazardous substances are identified, the contractor shall be required to prepare site health and safety plans, sampling and investigation plans, and if required by law, disposal/remediation plans. Any site investigations or remediations shall be performed in accordance with applicable laws and regulations. Typically, Alameda County Environmental Health Care Services Agency, Department of Environmental Health, would be the responsible agency for any releases of hazardous substances from underground storage tanks; the San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is

contaminated and the California Department of Toxic Substances Control could become involved if soils were contaminated. (Identified in the EIR).

Impact 4.6-2 Level of Significance with Mitigation: Less than Significant.

Impact 4.6-3: If left in place, the existing groundwater monitoring wells at the site could provide a potential conduit for contamination of the groundwater. (SIGNIFICANT).

Earth-moving activities during construction at the project site could damage the wells if they are left in place. The condition of the wells could also become deteriorated over time if they are left unattended. If they become damaged or deteriorated, the well casing or surface seal that restricts the downward migration of materials from the surface could become breached or broken, which could provide a potential conduit for contamination from the surface to the groundwater.

Mitigation Measure 4.6-3: The wells shall be sampled to demonstrate whether groundwater quality has been affected by previous land uses or off-site sources. If groundwater at the site has not been affected, the project sponsors shall seek regulatory agency approval to abandon the wells in accordance with the procedures contained in Alameda County Ordinance No. 73-68 regulating the construction, repair, reconstruction, destruction or abandonment of wells within Alameda County. If groundwater quality at the site has been affected, notification of the regulatory agencies will be required and it may be necessary to leave the wells in place. In this case, care would be required to ensure that the wells do not become damaged during construction, and that construction of the project does not impede access to the wells. Regular inspections of the wells would also be required to observe any signs of deterioration. (Identified in the EIR).

Impact 4.6-3 Level of Significance with Mitigation: Less than Significant.

Impact 4.6-4: The proposed project includes construction of a retail outlet that may involve the use, storage or transportation of hazardous substances. Activities at the site would include tire installation and a hydraulic lift may be installed as part of the proposed project. Any hazardous substances used at the site would need to be handled in accordance with applicable laws and regulations. (Less than Significant).

Retail operations typically involve the use, storage or transportation of hazardous substances. Because these substances are typically prepackaged and containerized, they do not normally pose a significant threat to human health or the environment. Also, the use, storage and transportation of hazardous materials is regulated by local, state and federal agencies. It would be necessary for the retail outlets to obtain any necessary regulatory permits and to comply with applicable laws and regulations.

Hydraulic lifts often have an underground oil reservoir to supply hydraulic oil. If an oil tank greater than 110 gallons is installed, it will be necessary for the retail outlet to obtain an underground storage tank permit from the Alameda County Health Care Services Agency, Department of Environmental Health, for the installation and use of the tank.

Mitigation Measure 4.6-4: As necessary, retail outlets shall obtain the necessary permits for the use, storage and transportation of any hazardous substances involved in their operations. (Identified in the EIR)

Impact 4.6-4 Level of Significance with Mitigation: Less than Significant.

NOTES - Hazardous Materials

- 1 NATEC Environmental Reporting Services, Ltd, Environmental Disclosure Report, March 14, 1994; Alameda County Health Care Services Agency, Site Brief for Underground Tanks, September 10, 1993.
- 2 McDonald, Mary, Orion Environmental Associates, site visit, 16 May, 1994.
- 3 Baseline Environmental Consulting, Phase I Site Assessment Report, Oakport Parcel, July 1990.
- 4 Baseline Environmental Consulting, Phase II Site Investigation, Oakport Parcel, January, 1991.
- 5 Anaya, Theresa, Baseline Environmental Consulting, telephone conversation with Mary McDonald of Orion Environmental Associates, October 13, 1993.
- 6 The total and soluble threshold limit concentrations are regulatory criteria used by the State of California to classify wastes for disposal purposes. A waste would be classified as hazardous if the total concentration of a metal exceeds the total threshold limit concentration or the soluble concentration of a metal exceeds the soluble threshold limit concentration. These criteria are contained in Title 22 of the California Code of Regulations.
- 7 Baseline, *supra n.5*.
- 8 Uribe & Associates, Phase II Environmental Site Assessment at the Edgewater Drive Property and Oakport Development Site, April 16, 1993.
- 9 A waste extraction test is used to measure the soluble concentration of a metal in soil or waste. If the soluble concentration exceeds the STLC, a waste is considered hazardous according to regulations contained in Title 22 of the California Code of Regulations. The total metal concentration measured in a sample is compared to ten times the soluble threshold limit to determine the need to perform a waste extraction test. Because the waste extraction test involves a ten to one dilution of a sample, the soluble concentration could not exceed the STLC unless the total metal concentration was at least equal to ten times the soluble limit concentration. If the total metal concentration is less than ten times the STLC, a waste extraction test would not be required and the waste would not be considered hazardous.
- 10 Baseline, *supra n.5*.
- 11 Schoenholz, Dan, Port of Oakland telephone conversation with Mary McDonald of Orion Environmental Associates, October 13, 1993.
- 12 Schoenholz, Dan, Port of Oakland telephone conversation with Mary McDonald of Orion Environmental Associates, October 12, 1993.
- 13 Baseline, *supra n.5*.

- 14 Schoenholz, Dan, Port of Oakland, telephone conversation with Mary McDonald of Orion Environmental Associates, October 5, 1993.
- 15 Bechtel Environmental, Inc., Expanded Site Inspection, Oakport Development Site, October 28, 1993.
- 16 The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) tracks contaminated sites identified under CERCLA or SARA. Sites within the system are ranked according to the Hazard Ranking System (HRS) criteria to assess the relative threat to public health, welfare, or the environment due to actual or potential releases of hazardous substances from the site. The HRS is the primary method to determine a site's eligibility to be placed on the National Priorities List (NPL). The NPL identifies sites at which the EPA may conduct remedial response actions.
- 17 Bechtel Environmental, Inc., *supra n.15*.
- 18 *Ibid.*
- 19 Schoenholz, Dan, *supra n.15*.
- 20 Schoenholz, Dan, Port of Oakland, telephone conversation with Mary McDonald of Orion Environmental Associates, April 5, 1994.
- 21 Uribe & Associates, *supra n.8*.

4.7 AIR QUALITY

SETTING

Meteorology and Climate

The Bay Area's climate, as with all California coastal environs, is dominated by the strength and position of the semi-permanent high pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, and infrequent rainfall; it drives the cool daytime sea breeze and maintains comfortable humidities and ample sunshine. Temperatures in Oakland average 58 degrees Fahrenheit annually, ranging on the average from the mid-40s on winter mornings to the mid-70s in late summer afternoons. Daily and seasonal oscillations of temperature are relatively small because of the moderating effects of the nearby ocean. In contrast to the steady temperature pattern, rainfall is highly variable and confined almost exclusively to the "rainy" period from early November to mid-April. Oakland averages 18 inches of precipitation annually, but because much of the area's rainfall is derived from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and near-drought conditions.

Winds in the Oakland area display several characteristic patterns. During the day, especially in summer, winds are from the southwest through northwest at 8 to 10 miles per hour as air is funneled through the Golden Gate and then diverges across the entire Bay Area. At night, especially in winter, the land becomes cooler than the ocean, and an offshore wind of 2 to 4 miles per hour develops from the Oakland hills toward the Bay. After sunrise and after sunset, there is usually a period of light and disorganized wind flow, as one wind pattern dissipates and the new pattern has not yet become fully established. The net effect of the prevailing winds is that the Oakland area is rapidly ventilated in the daytime with clean marine air, resulting in correspondingly good air quality. Nighttime air quality is also usually healthful in the East Bay area, although air stagnation at night during the winter creates a strong potential for elevated air pollution levels.

In addition to the winds that govern the horizontal rate and trajectory of air pollutants, the Bay Area experiences two characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The first type of inversion usually occurs in summer months, when the daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a giant lid over the region. As the clean ocean air moves inland, pollutants

generated from the urbanized area are restricted to the lower layer of cool air with minimal dilution from the upper layer of warm air. As the lower layer travels towards the inland valleys and movement slows down, the pollutants in the air undergo photochemical transformations in sunlight and create unhealthful levels of ozone, or "smog". The second type of inversion occurs at night, usually in winter months, as cool air pools in low elevations while the air aloft remains warm. The shallow radiation inversions trap pollutants near intensive traffic sources (e.g., freeways, shopping centers) and form localized violations of clean air standards called "hot spots." Although inversions can occur during all seasons of the year, the summertime regional inversion and the localized winter radiation inversion are the most regular events.

Ambient Air Quality Standards

The Clean Air Act Amendments of 1970 established national ambient air quality standards, with states retaining the option to adopt more stringent standards or to include other pollution species. California has adopted strict standards due to the unique meteorological problems in the state; these standards were established prior to the federal standards. State and federal ambient air quality standards currently in effect in California are shown in Table 4.7.1.

The ambient air quality standards establish the levels of air quality considered safe to protect the public health and welfare; the standards incorporate an adequate margin of safety. They are intended to protect those segments of the public most susceptible to respiratory distress, and known as sensitive receptors, such as asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels somewhat above the ambient air quality standards before adverse health effects are observed.

Ambient Air Quality

Existing and probable future levels of air quality in the Oakland area can be inferred from ambient air quality measurements conducted by the Bay Area Air Quality Management District ("BAAQMD") at its downtown monitoring station at 9th and Alice Streets. The Oakland station measures both regional pollution levels (ozone), as well as primary vehicular levels near busy roadways (carbon monoxide), but it does not measure all pollutants with an ambient air quality standard. The nearest representative data source for pollutants not measured in Oakland is the

TABLE 4.7.1: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	SAAQS/a/	NAAQS/b/
Ozone	1 hour	0.09 ppm/c/	0.12 ppm
Carbon Monoxide	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 hour	0.25 ppm	NA
	Annual	NA	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	NA
	3 hour	NA	0.5 ppm
	24 hour	0.04 ppm	0.14 ppm
	Annual	NA	0.03 ppm
Respirable Particulate Matter	24 hour	50 ug/m ³ /c/	150 ug/m ³
	Annual	30 ug/m ³	50 ug/m ³
Sulfates	24 hour	25 ug/m ³	NA
Lead	30 day	1.5 ug/m ³	NA
	Calendar Quarter	NA	1.5 ug/m ³
Hydrogen Sulfide	1 hour	0.03 ppm	NA
Vinyl Chloride	24 hour	0.010 ppm	NA

/a/ SAAQS (i.e. California standards) for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, respirable particulate matter are values that are not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

/b/ NAAQS (i.e. national standards), other than ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

/c/ ppm = parts per million by volume; ug/m³ = micrograms per cubic meter.

NA: Not Applicable.

SOURCE: California Air Resources Board, *California Air Quality Data Summary*, 1992.

TABLE 4.7.2: OAKLAND AMBIENT AIR QUALITY MONITORING SUMMARY, 1988-1992

Pollutant	Number of Days Standards Were Violated and Maximum Concentrations Measured				
	1988	1989	1990	1991	1992
<u>Ozone</u>					
1-Hour >0.09 ppm	1	0	0	0	0
1-Hour >0.12 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.10	0.08	0.06	0.06	0.08
<u>Carbon Monoxide</u>					
1-Hour >20 ppm	0	0	0	0	0
8-Hour > 9 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	10.0	10.0	8.0	9.0	7.0
Max. 8-Hour Conc. (ppm)	5.6	7.5	6.1	6.8	4.6
<u>Nitrogen Dioxide</u>					
1-Hour >0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.11	0.11	0.08	0.08	0.08
<u>Respirable Particulates (PM₁₀)</u>					
24-Hour > 50 µg/m ³	---	5/48	5/61	9/59	3/61
24-Hour >150 µg/m ³	---	0/48	0/61	0/59	0/61
Max. Daily Conc. (µg/m ³)	---	115	109	97	55
<u>Particulate Sulfate</u>					
24-Hour >25 µg/m ³	0/56	0/61	0/61	0/60	0/61
Max. 24-Hr. Conc. (µg/m ³)	7.9	15.9	8.6	8.9	15.0

Notes: Items expressed as a ratio of x/y indicate that standards were exceeded on x days out of a total of y days on which measurements were taken that year.

Conc. = concentration; ppm = parts per million; µg/m³ = micrograms per cubic meter

SOURCE: California Air Resources Board, Summary of Air Quality Data, 1988 - 1992, BAAQMD Monitoring Stations, Oakland (Alice) and Richmond (13th Street).

monitoring station in Richmond. Accordingly, Richmond data are used to supplement the downtown Oakland data in characterizing the ambient air quality conditions in the project area. Table 4.7.2 summarizes the last five years of published data from these monitoring stations.¹ The following conclusions can be drawn from these data:

- Photochemical smog (ozone) levels have exceeded the hourly state standard less than once per year, and the less stringent federal standards have not been exceeded in the last five years, according to the published data.
- Measurements of carbon monoxide ("CO") show low baseline levels, with the hourly maximum averaging less than 50 percent of the allowable California standard. Similarly, maximum 8-hour CO levels are about three parts per million (ppm) below the allowable 8-hour exposure. Nitrogen dioxide standards are also well within allowable maximum concentrations.
- Airborne dust levels measured at Richmond show occasional violations of the California respirable particulate matter ("PM₁₀") standard on about 10 percent of all monitoring days. Peak levels of more than twice the state ambient air quality standards for PM₁₀ have been observed, but year-to-year variation in maxima is considerable. The three times less stringent federal PM₁₀ standard has not been exceeded since PM₁₀ monitoring was initiated in the Oakland/Richmond area.

Air Pollution Sources

Table 4.7.3 summarizes the relative contributions of mobile, stationary and diffuse areawide sources of emissions. Motor vehicles are the primary source of air pollution in the Bay Area air basin. On-road equipment produces about one third of all reactive organic gases, one half of all nitrogen oxides (both ozone precursors), and two thirds of all carbon monoxide emissions.²

Stationary sources of emissions include large industrial facilities as well as smaller sources such as service stations, dry cleaners, wastewater treatment plants, etc. Residential uses also contribute to air emissions from paints and solvents, fireplaces, heating and landscaping equipment. Major stationary sources of emissions are industrial uses concentrated along the Interstate 880 corridor and along the Oakland Estuary.³ Because the BAAQMD has strictly regulated major stationary sources of air emissions, the contribution from such sources to the emissions total has decreased within the last several decades, such that smaller, non-smokestack sources now generate the largest fraction of stationary source emissions.

TABLE 4.7.3: BAY AREA AIR BASIN EMISSIONS INVENTORY (1991)

Source Category	Pollutant				
	CO	ROC	NO _x	SO _x	PM ₁₀
On-Road Mobile	67%	37%	53%	23%	5%
Other Mobile /a/	21%	12%	18%	20%	1%
Industrial Activities	10%	36%	29%	57%	22%
Miscellaneous /b/	2%	15%	<1%	<1%	73%
Daily Emissions (tons/day)	2,428	819	551	121	1,044

/a/ Construction equipment, ships, trains, planes, lawn equipment.

/b/ Fires, road dust, construction dust, paints & solvents, pesticides.

CO = carbon monoxide

ROC = reactive organic compounds

NO_x = nitrogen oxides

SO_x = sulfur oxides

PM₁₀ = respirable particulate matter with 10-micron diameter or less

SOURCE: BAAQMD, *Air Quality Handbook*, 1993.

Sensitive Receptors

Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered sensitive compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Recreational users of the Martin Luther King, Jr. Regional Shoreline are the nearest sensitive receptors to the project site (see Section 4.1, Figure 4.1.1). Biotic habitats at Damon Slough could also be considered sensitive to air pollution.

Applicable Plans And Policies

Federal

The 1970 federal Clean Air Act Amendments required the states to classify air basins (or portions thereof) as either "attainment" or "non-attainment" with respect to the criteria air pollutants, based on whether or not the national ambient air quality standards have been achieved, and to prepare air quality plans containing emission reduction strategies for those areas designated as "non-attainment." The project site is located within the San Francisco Bay Area air basin, which was designated as non-attainment under the national ambient air quality standards for ozone and carbon monoxide.⁴

The 1982 Bay Area Air Quality Plan ("1982 Plan"), was developed for the purpose of attaining the national standards for ozone and carbon monoxide by 1987.⁵ By 1987, however, the San Francisco Bay Area air basin was still non-attainment for those two pollutants. Accordingly, a contingency plan element of the 1982 Plan has since been implemented. Pursuant to the 1990 federal Clean Air Act Amendments, a new plan will be developed for the San Francisco Bay Area air basin to satisfy new, more demanding federal air quality requirements. This new federal air quality plan is anticipated to be completed in 1994.

State

In 1988, the State of California passed the California Clean Air Act which, like its federal counterpart, called for designation of areas as "attainment" or "non-attainment," but in reference to state ambient air quality standards rather than to national standards. The San Francisco Bay Area air basin has been designated as non-attainment under State standards for ozone, carbon monoxide, and respirable particulates (PM₁₀).⁶ The 1988 California Clean Air Act also requires non-attainment areas for ozone and carbon monoxide to develop air quality plans that contain strategies for achieving attainment. For this purpose, the 1991 Clean Air Plan ("1991 CAP") was developed for the San Francisco Bay Area air basin.⁷ (Respirable particulates were not included in the same legislative scheme as the other criteria pollutants.) The 1991 CAP mandates a five percent per year air quality improvement and predicts regional attainment of the CO standard by 1995 and of the federal ozone standard by the end of 1997. It contains measures to reduce CO and ozone precursor emissions as well as implementation strategies, including additional stationary source reductions, congestion management, and gradual elimination of older cars that represent less than 10 percent of the travel fleet but generate almost one-half of the mobile

source emissions. A federal plan under development for release later this year uses the 1991 CAP as a framework for a plan that will be submitted as part of the revision/update of the State Implementation Plan ("SIP").

The California Air Resources Board ("ARB") is the state agency responsible for regulating air quality. The ARB's responsibilities include establishing state ambient air quality standards, emissions standards and regulations for mobile emissions sources (autos, trucks), and overseeing the efforts of county-wide and multi-county air pollution control districts, which have primary responsibility over stationary sources. The BAAQMD is the regional agency responsible for air quality regulation within the San Francisco Bay Area air basin. The BAAQMD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review activities.

City of Oakland

The Circulation Element of the Oakland *Comprehensive Plan* contains the following general policy that could be applicable to the project:

"In deciding on major land use and circulation issues, the City will consider the possible effects on air quality and energy consumption." (General Considerations Policy 1)

IMPACTS AND MITIGATION

The proposed Coliseum Shoreline Project would affect air quality primarily through construction-related emissions, and transportation-related vehicular exhaust emissions, and stationary source activities. Construction-related emissions would be short-term.

Transportation-related vehicular exhaust emissions would be long-term impacts, although a substantial portion of these effects would occur in conjunction with travel to other retail facilities within the region if not to the project site. Stationary source emissions would occur in conjunction with increased energy demand met by fossil fuel combustion in PG&E power plants or at on-site facilities (space heaters, water heaters, etc.).

Significance Criteria

A project is considered to have an adverse air quality impact if it causes violation of ambient air quality standards where none currently exist; if it contributes measurably to an existing violation

of standards; if it exposes a substantial number of persons to an elevated health risk; or if it conflicts with established air quality plans or policies.

For some pollutants such as carbon monoxide, the amount of emissions can be calculated and dilution factors can be estimated to determine the quantitative degree of ambient air quality deterioration associated with a specific source. For other air pollutants such as ozone, air quality deterioration does not occur until after chemical transformation and dispersion, and is often far removed from the time and location the pollutant was emitted. In this situation, air quality impacts must be estimated on a regional basis and must be considered relative to regional air quality planning guidelines.

The proposed project relates to the air quality planning in the region through the growth assumptions made by the Association of Bay Area Governments ("ABAG") for the region. ABAG uses general plans from cities such as Oakland and any specific development plans to predict future patterns of population, housing, employment and land use, which in turn can be used to predict air pollution emissions from transportation sources. To the extent that the proposed project has been anticipated in the ABAG growth assumptions and the project proponents implement those transportation control measures to the best of their ability, the regional emissions from the project would not have a significant air quality impact. If the proposed project causes greater levels of emissions to be generated than anticipated, or if these emissions occur much sooner than currently predicted, or if available transportation control measures are not fully implemented, then the air quality impact of the project from non-conformity with the 1991 CAP are considered significant on a regional scale. Significance is generally evaluated in terms of a threshold level that represents sufficient emissions to constitute a measurable impediment to attainment or maintenance of air quality standards on a regional scale.

The BAAQMD's *Guidelines for Assessing Impacts Projects and Plans* (1985) outlines "significance tests" that determine the potential effect of the project-generated criteria air pollutants on regional air quality.⁸ The BAAQMD considers a net increase in emission of one percent over existing county-wide emissions or a modeled violation of carbon monoxide standards to be significant. Other significance thresholds include a net increase of combined mobile and stationary sources of 150 pounds per day of hydrocarbons, nitrogen oxides, sulfur oxides or respirable particulates. Because curbside carbon monoxide concentrations are modeled for mobile sources, there is an additional criterion of 550 pounds per day of carbon monoxide that would be considered significant if it leads to a modeled violation of carbon monoxide standards.

Impact 4.7-1: Construction activities associated with the project would generate dust that includes respirable particles known as PM₁₀ (particles 10 microns or less in diameter). This would be a short-term adverse impact. (Less than Significant)

Project development would require site clearing, grading and other earth moving activities prior to construction of new buildings, and would result in soil disturbance that would expose dust. Dust emissions vary with the level of construction activity, the type of soil, and the prevailing weather conditions. Because the project site is relatively flat, requirements for any extensive grading would be minimal.

Dust generation is typically estimated based on the area of the surface disturbed, with estimates ranging from 30 to 60 pounds per acre per day, assuming that effective dust control procedures (such as regular watering of exposed surfaces) are employed. This dust includes all particles of 30 microns in diameter or less (total suspended particulates), of which PM₁₀ particles constitute about one third. Therefore, the amount of PM₁₀ generated by the project is estimated to be about 10 to 20 pounds per acre per day during active construction. Dust levels would be considered significant if they are on the order of 150 pounds per day of PM₁₀, which implies that a construction site would need to be about 15 acres or larger to result in a significant dust impact. Because the site would be developed in two phases, it is unlikely that the entire 22.6 acre site would experience soil disturbance on any given day. The soil disturbance footprint would probably be less than 15 acres daily. Therefore, dust impacts are anticipated to be less than significant given the size and characteristics of the site.

Although construction impacts are anticipated to be less than significant under typical conditions, there is a potential for significant impacts to occur if dust were to blow across Oakport Street and impede visibility on the freeway during normal west to east onshore winds. Visible dust would also be perceived as intrusive to recreational users at the seashore during offshore winds.

Mitigation Measure 4.7-1: To assure that construction-related dust emissions are maintained at a less than significant level and to reduce overall levels of dust emissions, a dust control plan shall be developed and implemented that includes the following measures: (1) limiting area of site disturbance to less than 15 acres on any given day; (2) regular watering of disturbed soil (at least twice per day); (3) hydroseeding of all cleared or graded areas if construction on the parcel is not expected to begin within 60 days; (4) washing construction site access points to public streets for a distance of 250 feet in each direction at the conclusion of each workday; and (5) terminating grading and other surface disturbance if winds exceed 25 mph. (Identified in the EIR)

Impact 4.7-1 Level of Significance with Mitigation: Less than Significant.

Impact 4.7-2: During construction activities, equipment exhaust would be generated, contributing to air quality emissions. (Less than Significant)

Similar to dust emissions, levels of equipment exhaust from construction equipment would be related to the area under construction. Equipment exhaust emissions were calculated, assuming that site build-out would occur in 200 workdays and that 200,000 brake-horsepower-hours (BHP-HR) of equipment operations would be required per acre developed as part of the proposed project. If all the on-site equipment were diesel-powered, the following average daily emissions would be generated:

Carbon Monoxide	44 lb/day
Reactive Organic Gases	14 lb/day
Nitrogen Oxides	197 lb/day
Sulfur Oxides	14 lb/day
Exhaust Particulates	7 lb/day

These calculations indicate that the nitrogen oxides ("NO_x") emissions may intermittently exceed the BAAQMD significance threshold of 150 pounds per day. However, these calculations are based on emissions data developed 20 years ago and presume that equipment is not well maintained. With a more realistic assumption as to the age of the construction equipment (newer equipment is somewhat "cleaner"), and with a requirement for periodic low-NO_x tune-ups for such equipment, exhaust emissions impacts can be maintained at less than significant levels.

Mitigation Measure 4.7-2: All on-site construction equipment shall receive a low-NO_x tune-up prior to use at the site and shall be re-tuned after 90 days on the job site. Trucks or other equipment shall not be left to idle continuously for more than 10 minutes while waiting to load or unload. (Identified in the EIR)

Impact 4.7-2 Level of Significance with Mitigation: Less than Significant.

Impact 4.7-3: Traffic generated by the proposed project would incrementally increase regional vehicular emissions, but would not result in emissions exceeding BAAQMD significance thresholds. (Less Than Significant)

The project would result in the development of uses at the currently vacant site that generate large volumes of automobile traffic; based on the transportation analysis for this study,⁹ it is

estimated that the proposed project would generate 11,509 daily trips. After adjustment for reductions due to internal trips and capture of "pass-by" vehicles already on area roads, a total of 8,080 "new" trips would be generated. The daily regional emissions from "new" project-related traffic were estimated based on recently updated vehicular emissions factors ("EMFAC7F") combined with estimated project-related vehicle miles traveled (VMT). Calculated project emissions for the build-out year 1995, as shown in Table 4.7.4, would be below BAAQMD significance thresholds for all mobile source emissions except carbon monoxide. Because project carbon monoxide emissions exceed the BAAQMD threshold of 550 pounds per day, a micro-scale analysis would be required. Carbon monoxide impacts are discussed under Impact 4.7.4, below.

Although project-related vehicular emissions would be less than the level considered a significant increase in regional emissions, any contribution to air pollution is an impediment to the attainment of the clean air standards. However, independent of the magnitude of project vehicular emissions, it is likely that Oakland residents who would patronize the proposed project are currently traveling elsewhere in the region to shop, and would continue to do so if the proposed project were not implemented. By meeting the demand for warehouse retail shopping closer to the location of the demand, the proposed project could be considered to have a less than significant impact on a cumulative, regional basis. Nevertheless, any potential travel reduction by single occupant vehicles for employee commuting or customer shopping should be pursued as aggressively as possible.

Mitigation Measure 4.7-3: The project sponsor shall require all site occupants to implement available transportation demand measures for employees and customers to reduce mobile source emission levels from project-related traffic to the extent feasible. (Identified in the EIR)

Impact 4.7-3 Level of Significance with Mitigation: Less than Significant.

Impact 4.7-4: Traffic generated by the project would result in incremental increases in localized carbon monoxide concentrations but would not create any violation of air quality standards. (Less than Significant)

As indicated in Table 4.7.4, daily project-related carbon monoxide (CO) emissions would exceed the 550 lb/day threshold and may result in localized "hot spots" or areas with high concentrations of emissions around stagnation points such as major intersections. Project-related traffic may add more cars as well as cause existing non-project traffic to travel at slower, less pollution-efficient travel speeds.

TABLE 4.7.4: ESTIMATED DAILY REGIONAL EMISSIONS FROM PROJECT-RELATED TRAFFIC (1995 build-out)

<u>Pollutant</u>	<u>Project Emissions/a/</u>	<u>Significance Threshold/b/</u>	<u>As % of County /d/</u>
Carbon Monoxide	1,573 lb/day	550 lb/day/e/	0.19
Hydrocarbons	149 lb/day	150 lb/day	0.12
Nitrogen Oxides	101 lb/day	150 lb/day	0.06
Sulfur Oxides	8 lb/day	150 lb/day	0.03
Particulate Matter/c/	130 lb/day	150 lb/day	0.11

/a/ Based on 8,080 trips multiplied by 5.66 miles/trip multiplied by composite emissions factors that reflect an average speed of 30 mph. BAAQMD hot start / cold start correction factors for shopping centers were used; idling emissions assume 3 minutes of idling per trip. EMFAC7F-based composite vehicle emission factors are from BAAQMD, June 1993. Total organic gases ("TOG") were converted to reactive hydrocarbons ("HC") on the basis of the ratio of HC to TOG for on-road automobiles and light duty trucks as shown in BAAQMD's *Base Year 1990 Emissions Inventory Summary Report* (October 1993).

/b/ Bay Area Air Quality Management District, *Air Quality and Urban Development, Guidelines for Assessing Impacts of Projects and Plans*, 1985.

/c/ Includes 1.0 gram/mile entrained road dust

/d/ Shows project emissions as a percentage of countrywide, transportation-related emissions in 1995. Alameda County emissions are based on ARB's Emission Inventory 1990 (September 1993) and trend information contained in BAAQMD's *Emission Inventory Summary Report* (October 1993).

/e/ Requires a "micro-scale analysis" if this level is exceeded. See Impact 4.7-4.

SOURCE: Orion Environmental Associates, 1994; Environmental Science Associates.

In order to evaluate "hot spot" potential, a micro-scale impact analysis was conducted at six intersections in the project vicinity under a variety of scenarios, where turning movements and levels of service (as a travel speed indicator) were calculated as part of the transportation analysis for this report.¹⁰ A Caltrans screening approach based on the CALINE4 model was used to estimate CO concentrations at these intersections.¹¹ Carbon monoxide concentrations were calculated at a distance of 25 feet from the edge of each roadway to determine "hot spot" potential under the following two scenarios of "worst-case" conditions: (1) AM peak hour weekday traffic volumes and theoretical minimum atmospheric mixing, and (2) Saturday noon peak maximum traffic volumes but less restrictive atmospheric dispersion. In addition to the

project-generated emissions, the calculations also included the CO contribution from freeway traffic which, in areas of elevated microscale exposure, is the dominant source. Results of the "hot spot" analysis are shown in Table 4.7.5 for hourly CO exposures during the weekday and Saturday traffic peaks.

One-Hour Carbon Monoxide Levels

One-hour CO levels are shown in Table 4.7.5. As indicated in the table, the maximum project-related-microscale air quality impact would be at the Oakport/66th Avenue intersection with a total CO increase of 1 part per million (ppm) from the no project (existing) condition during the weekday peak traffic hour. Maximum weekday microscale exposure at any modeled intersection, including a 6 ppm background level, would be 9 ppm, of which approximately 1 ppm is attributable to the proposed project. The worst-case combination of the project plus background would be well below the California hourly CO standard of 20 ppm. During the noon hour on Saturdays, project-generated traffic would be at a maximum, and combined with traffic from concurrent Coliseum events, would result in reduced levels of service at the I-880 ramps and intersections at 66th Avenue. This level of traffic, despite the less restrictive mid-day dispersion meteorology, could result in peak microscale hourly levels of CO of 10 ppm in proximity to the freeway ramps. This theoretical worst-case exposure would nevertheless remain well below the most stringent California hourly CO standard of 20 ppm.

Eight-Hour Carbon Monoxide Levels

Eight-hour CO levels are shown in Table 4.7.6. These levels were calculated assuming that peak eight-hour levels are a fractional proportion of the one-hour concentrations identified in Table 4.7.5. A "persistence factor" of 0.7 was used for the conversion, consistent with Caltrans methodology. The calculated eight-hour CO levels within 25 feet of all intersections analyzed are below the eight-hour standard of 9 ppm, including a calculated background level of 4.2 ppm. (This background level value was the second highest eight-hour concentration measured at the Oakland BAAQMD station in 1992.)

Mitigation Measure 4.7.4: None required.

TABLE 4.7.5: ESTIMATED HOURLY CARBON MONOXIDE LEVELS AT KEY INTERSECTIONS^{/a/}, in parts per million

Intersection	Existing, 1993		Existing Plus Project, No Coliseum Events, ^{/b/} 1995		Existing Plus Project, with Coliseum Events, 1995		Cumulative (Including Project) with Coliseum Events, 1995	
	Weekday	Sat. Noon	Weekday	Sat. Noon	Weekday	Sat. Noon	Weekday	Sat. Noon ^{/d/}
Oakport St/66th Ave	7	7	8	7	8	7	8	NA
Option 1			7	7	7	7	8	NA
Option 2			7	7	7	7	7	NA
66th Ave/I-880 SB ^{/c/} ramps	8	7	8	7	8	10	9	NA
Mitigation					8	9	8	NA
66th Ave/I-880 SB ramps	8	7	8	7	8	10	9	NA
Oakport St/I-880 SB ramps	8	7	8	7	8	7	8	NA
Oakport St/Hassler Way	9	8	9	8	9	8	9	NA
Oakport St @ Project	9	8	9	8	9	8	9	NA

California Hourly CO Standard = 20 parts per million

^{/a/} Carbon Monoxide (CO) levels include I-880 contribution plus project site plus background. Background = 6 parts per million, based on BAAQMD Guidelines, Figure V-B-4 (8/91) adjusted for 1993 using Table V-B-2 (6/93). Meteorological assumptions for weekday AM peak hour are "F" stability and 1 meter/second wind speed, and for Saturday noon are "D" stability and 1 meter/second wind speed. EMFAC7F emission factors are used.

^{/b/} Coliseum events include concerts, sports contests, and other events held at the Coliseum and the Arena that generate substantial traffic (see Section 4.4 for further explanation).

^{/c/} NB = northbound travel direction; SB = southbound travel direction.

^{/d/} NA = Not applicable; This scenario is assumed to affect weekday peak hour conditions only (see Section 4.4 text discussion for explanation).

SOURCE: Orion Environmental Associates, 1994. Based on Caltrans Air Quality Technical Analysis, 1988.

TABLE 4.7.6: ESTIMATED EIGHT-HOUR CARBON MONOXIDE LEVELS AT KEY INTERSECTIONS^{/a/}, in parts per million

Intersection	Existing, 1993		Existing Plus Project, No Coliseum Events, 1995		Existing Plus Project, with Coliseum Events, 1995		Cumulative (Including Project) with Coliseum Events, 1995	
	Weekday	Sat. Noon	Weekday	Sat. Noon	Weekday	Sat. Noon	Weekday	Sat. Noon /d/
Oakport St/66th Ave	5.0	4.6	5.6	4.9	5.6	4.9	5.6	NA
Option 1			5.1	4.8	5.1	4.8	5.3	NA
Option 2			5.1	4.8	5.1	4.8	5.1	NA
66th Ave/I-880 SB ^{/c/} ramps	5.5	4.9	5.5	5.0	5.7	7.1	6.0	NA
Mitigation					5.7	6.4	5.8	NA
66th Ave/I-880 NB ramp	5.5	5.0	5.4	5.0	5.6	6.6	6.1	NA
Oakport St/I-880 SB ramp	5.3	4.8	5.4	5.0	5.4	5.0	5.4	NA
Oakport St/Hassler Way	6.6	5.5	6.4	5.5	6.4	5.5	6.4	NA
Oakport St @ Project	6.6	5.5	6.5	5.7	6.5	5.7	6.5	NA

California Eight-Hour CO Standard = 9 parts per million

/a/ Carbon Monoxide (CO) eight-hour levels are based on one-hour levels times 0.7 persistence factor. The levels include 4.2 parts per million background CO concentration (based on BAAQMD Guidelines, Figure V-B-5 (8/91) adjusted for 1993 using Table V-B-2 (6/93)).

/b/ Coliseum events include concerts, sports contests, and other events held at the Coliseum and the Arena that generate substantial traffic (see Section 4.4 for further explanation).

/c/ NB = northbound travel direction; SB = southbound travel direction.

/d/ NA = Not applicable; This scenario is assumed to affect weekday peak hour conditions only (see Section 4.4 text discussion for further explanation).

SOURCE: Orion Environmental Associates, 1994. Based on Caltrans Air Quality Technical Analysis, 1988.

Impact 4.7.5: Operation of the proposed project would create a stationary source of air pollutant emissions on-site due to minor combustion of natural gas for heating and cooking and add to off-site stationary source emissions due to electrical demand associated with the project. (Less than Significant)

Value retail activities such as the proposed project typically are considered minor stationary sources of air pollutant emissions, due to combustion of natural gas for space heating and hot water, and for cooking hot take-out food. Natural gas consumption for the project was estimated to be 500,000 cubic feet per month. Natural gas is a relatively "clean" fuel and daily emissions from combustion of this fuel would be 2.0 pounds of NO_x and less than 0.5 pounds per day of any other pollutant. Inclusion of natural gas combustion emissions in the total project-related pollution burden would not change any conclusions regarding potential significance.

The project would also result in off-site stationary source emissions due to the project's electrical demand that would be met by burning fossil fuels in Bay Area power plants. Although the per-square-foot electrical consumption factor for retail stores is generally low, the large square footage associated with the proposed project could create a non-negligible power demand. Power generation emissions, however, are not quantified because resources of the power company (Pacific Gas & Electric) vary from season to season. Moreover, these emissions have already been included in regional growth rates/control programs for power plants. Due to stationary source emissions, electrical power generation will, however, incrementally increase the level of project-related NO_x emissions.

Mitigation Measure 4.7-5: The proposed project shall maximize the use of energy-saving devices and energy conservation techniques, including applications to lighting, heating and cooling systems, to minimize the project's overall energy demand. (Identified in the EIR)

Impact 4.7-5 Level of Significance with Mitigation: Less than Significant.

NOTES - Air Quality

- 1 California Air Resource Board, *Summary of Air Quality Data*, 1988-1992.
- 2 Bay Area Air Quality Management District, *Air Quality Handbook*, 1993.
- 3 City of Oakland, Open Space Conservation and Recreation Element, Technical Report No. 7.
- 4 California Air Resources Board, *Area Designations for State and National Ambient Air Quality Standards*, 1992.
- 5 Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, *Bay Area Air Quality Plan*, 1982.
- 6 *supra n. 4*.
- 7 Association of Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission, *1991 Clean Air Plan*, 1991.
- 8 Bay Area Air Quality Management District, *Air Quality and Urban Development; Guidelines for Assessing Impacts of Projects and Plans*, 1985.
- 9 Korve Engineering, *Transportation Analysis for the Coliseum Shoreline Project*, 1994.
- 10 *Ibid.*
- 11 California Department of Transportation, *Air Quality Technical Analysis Notes*, 1988.

4.8 HYDROLOGY AND WATER QUALITY

SETTING

Regional

The western boundary of the proposed project site lies approximately 500 feet east of the Martin Luther King, Jr. Regional Shoreline. The project site drains to Damon Slough, which abuts the site on the northwest. The slough is an engineered channel that extends approximately 1,100 feet west of I-880, discharging storm runoff into San Leandro Bay.

Stream flows in Damon Slough originate in the Lion Creek and Arroyo Viejo watersheds to the east. These watersheds extend from the Oakland hills, south of Joaquin Miller Park and east of Interstate 580, westward through the heavily urbanized portions of Oakland. Stream flows in the Oakland hills east of I-580 are principally open creek channels with occasional culverts and storm drains.¹ Between I-580 and East 14th Street, runoff flows in Lion Creek and Arroyo Viejo are carried by municipal storm drains and underground culverts. East of 14th Street, both stream courses are engineered drainage channels. Lion Creek joins Arroyo Viejo north of the Coliseum complex, flowing into Damon Slough east of I-880.

Project Site

The storm runoff patterns around the project site are primarily affected by regional and local transportation facilities. A system of drainage pipes ranging in size from 18 inches to 30 inches collects runoff from I-880 opposite the site; the accumulated storm flows drain northward along the east side of the freeway and discharge into Damon Slough. Drainage from I-880 and its interchange at 66th Avenue north of the property and Damon Slough flows into a series of pipes sized from 18 inches to 36 inches on both sides of the freeway. These pipes drain southward and also discharge into the channel of Damon Slough.

Runoff from parts of the property and local adjoining streets drains into municipal storm drains and an open ditch. Drainage collected from the southern part of the site and Hassler Way flows into a 12- to 15-inch storm drain near the southeastern corner of the property, continues southward along Oakport Street, and discharges into the engineered channel of Elmhurst Creek, approximately 800 feet south of the site. Surface flows from the eastern portion of the property and Oakport Street drain into an open channel on the eastern perimeter of the site and discharge directly into Damon Slough.

Drainage on the property is influenced by site topography and surface conditions. On the site, there are man-made drainage channels and a man-made stormwater detention/settling basin facility dug in dry fill material, that may flood during the rainy season, resulting in localized ponding of accumulated precipitation. Bare soils and vegetative ground cover (grasses and forbs) facilitate on-site percolation of rainfall.

Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency ("FEMA") show the project site to be entirely within the mapped boundaries of the 500-year flood event. Development within the 500-year flood zone is generally acceptable for non-residential and non-ambulatory caretaking uses. The FEMA maps indicate that in the vicinity of the project site, Damon Slough contains 100-year floods. The site is not subject to flooding hazards during the 100-year flood event.²

A review of City records indicates that the existing storm drains in the project area have adequate capacity to accommodate current flood flows. These records contain no indications of localized flooding hazards for the project area.³

Water Quality

Surface Water

Urban uses in the project area contribute suspended sediments, nutrients, trace metals, chemical pollutants (pesticides), oil and grease, and organic debris to the storm flows collected by on-street drains. Pollutant levels in storm runoff would be highest in the early part of the hydrologic year and decrease with successive storm flows.

The project area is located within the jurisdiction of the Alameda County Urban Runoff Clean Water Program, formed to comply with the non-point source pollution control requirements as regulated by the California Regional Water Quality Control Board ("RWQCB"). The RWQCB issued a National Pollutant Discharge Elimination System ("NPDES") stormwater discharge permit to the Alameda County Urban Runoff Program in October 1991. The permit requires municipalities in Alameda County to implement a Storm Water Management Plan to control pollutants that reach their storm drain systems.

The main objective of the Storm Water Management Plan is to propose a comprehensive storm water management program to protect the beneficial uses of San Francisco Bay and its tributaries

in Alameda County. The Plan is designed to reduce the discharge of pollutants in storm water to the maximum extent possible. The Plan includes seven program components: public information and participation; municipal government activities; new development and construction site controls; illicit discharge identification and elimination; industrial dischargers identification and runoff control; monitoring; and runoff control. The Alameda County Flood Control and Water Conservation District is responsible for the overall coordination of Program planning.

Groundwater

The project site is located in the Santa Clara Valley groundwater basin, which extends from southern Santa Clara County northward on both sides of the Bay.⁴ The Storm Water Management Plan indicates that this basin is designated for use as domestic or municipal, industrial, or agricultural supply and provides specific water quality objectives in the maintenance of ground water conditions. No known uses of groundwater occur in the vicinity of the project site.

A groundwater analysis was conducted for the site in 1991.⁵ The 1991 study indicated that groundwater was encountered at depths of five to seven feet below ground surface. The report did not indicate ground water flow directions. The results of groundwater sample analyses indicated no organic compounds above the level of detection. Metal analyses identified barium, copper, nickel, thallium, and zinc above detection levels, but below maximum contaminant levels for drinking water, as listed in Title 22 of the California Code of Regulations.

In 1993, a groundwater analysis was performed for the Grand Auto site immediately west of the property.⁶ The groundwater study for this adjoining property indicated the presence of petroleum hydrocarbons in water samples from two locations. Chemicals detected on the adjoining site included toluene, chlorobenzene, and TPH as diesel. No semi-volatile organic compounds were detected in any of the well samples.

Regulatory and Policy Framework

City of Oakland

The City of Oakland provides control over surface water quality through the implementation and enforcement of Ordinance #11590 of the City of Oakland Municipal Code. The ordinance establishes comprehensive guidelines for the regulation of discharges to the City's storm drain

system. The ordinance directs and guides control of surface water quality by identifying specific protective measures required by the city for development projects. The ordinance requires the implementation of best management practices for new developments and redevelopments. The guidelines also address the protection of the City's watercourses.

The City's storm water management and discharge control ordinance identifies specific mechanisms for the inspection and enforcement of the ordinance's provisions. Measures include testing and monitoring of affected waters, abatement of unacceptable conditions, emergency work by the city, and special assessment liens to recover costs for city-sponsored remedial work.

San Francisco Bay Conservation and Development Commission

The San Francisco Bay Conservation and Development Commission ("BCDC ") has "Bay" jurisdiction over all areas below the line of highest tidal action which is at 6.1 National Geodetic Vertical Datum in the project vicinity.⁷ The Commission also has "shoreline band" jurisdiction over an area 100 feet upland and parallel to the line of highest tidal action. Under these criteria, BCDC has jurisdiction over a 100-foot wide corridor parallel to Damon Slough along the northwestern boundary of the property. Consequently, the project would require approval from BCDC prior to undertaking any work within the 100-foot shoreline band on the northwest perimeter of the site.

As discussed in Section 4.1 of this EIR, BCDC has indicated four areas of interest stemming from its jurisdiction over the project site, including water quality impacts.⁸ As specific guidelines for project development, the Commission refers to the policies of the San Francisco Bay Plan for shoreline use, public access, treatment of marshes, and water quality maintenance. In its review of the project application, the Commission will consider the project's compliance with the policies and intent of the Bay Plan.

California Regional Water Quality Control Board

The RWQCB administers the NPDES storm water permitting program in California. Construction activities of five acres or more are subject to the permitting requirements of the NPDES program.⁹ As a condition of granting a permit, the Board requires the preparation of a Storm Water Pollution Prevention Plan ("SWPPP") by the owners of the construction site. The plan would include specifications for best management practices ("BMP's") which would be implemented during project construction to control contamination of surface flows through the

potential discharge of pollutants from the site. Additionally, the plan would describe measures to prevent or control pollutants in runoff after construction is complete and identify a plan to inspect and maintain these measures.

The SWPPP must be prepared and approved before construction begins, usually during the planning and design phases of a project. The owners submit a Notice of Intent to the RWQCB prior to the beginning of construction. Implementation of the plan starts with the commencement of construction and continues through the completion of the project. The SWPPP remains on-site during construction. After completion of the project, the owners submit a Notice of Termination to the RWQCB to indicate that construction is completed.

IMPACTS AND MITIGATION

Significance Criteria

A proposed project would have a significant effect on hydrological conditions and water quality if it would substantially degrade water quality, contaminate a public water supply, substantially degrade or deplete ground water resources, or interfere substantially with ground water recharge.¹⁰

Project Site

Impact 4.8-1: The proposed project would result in an increase in the surface runoff generated at the site. (Less than Significant)

The project would require the development of extensive impervious surfaces on approximately 22.6 acres of property that are presently bare soil and sparsely vegetated with grasses and forbs. The site's generally level topography promotes on-site percolation of precipitation and retention of accumulated flows. Depressions in the site's surface result in localized ponding and pooling of surface drainage, reducing runoff. Existing excavated channels and a stormwater detention/settling basin facility drain lower elevation areas of the site adjacent to Oakport Street and the railroad track embankment.

The development of building surfaces and parking areas on the property would increase the level of runoff from the site and would cumulatively contribute to surface flows from the area. The only existing storm drainage facility is the on-site man-made stormwater detention/settling basin facility. Currently, no storm drainage facilities exist in Oakport Street immediately adjoining the

Project plans should incorporate the Best Management Practices for Construction Activity as specified by the Nonpoint Source Pollution Control Program. The BMP's include measures guiding the management and operation of construction sites to control and minimize the potential contribution of pollutants to storm runoff from these areas. These measures address procedures for controlling erosion and sedimentation, and managing all aspects of the construction process to ensure thorough control of potential water pollution sources. The Best Management Practice Handbooks also address the preparation of a storm water pollution prevention plan, the selection of BMP's, and the monitoring process for compliance with the SWPPP.

In addition, the following measures are required by the City as standard conditions of approval:

- a. No grading shall occur without a valid grading permit issued by the Office of Planning and Building, and prior to the issuance of any grading permit, a drainage plan and an erosion control plan shall be approved by the Office of Planning and Building. All graded slopes should be planted to prevent erosion according to an erosion control plan approved prior to the issuance of any grading permit.
- b. No grading shall occur within the period of October 15 through April 15 unless specifically authorized by the Engineering Services Division of the Office of Planning and Building.
- c. Any project that does not require a grading permit but results in disturbance of the ground will require installation of appropriate remedial measures to assure that water runoff does not transport sediments to the storm water system.

The following measures are proposed to be included in the SWPPP to minimize the potential adverse water quality impacts of the project:

- d. Remove surface cover from soils immediately prior to construction. Uncover soils only where required for construction activities.
- e. Cover stockpiles of soil.
- f. Install silt fences.

Impact 4.8-2 Level of Significance with Mitigation: Less than Significant.

NOTES - Hydrology and Water Quality

- 1 City of Oakland, Watershed Map of the Oakland - Berkeley Area, 1993.
- 2 Federal Emergency Management Agency, Flood Insurance Rate Map: City of Oakland, California, Alameda County, 1982.
- 3 Wong, Ken, Supervising. Civil Engineer, Oakland Department of Public Works, personal communication, May 12, 1994
- 4 California Regional Water Quality Control Board for San Francisco Bay Region, Water Quality Control Plan, December, 1986.
- 5 Baseline Environmental Consulting, Phase II Site Investigation: Oakport Parcel, January, 1991.
- 6 PACCAR Automotive, Inc., title same as Hazardous Materials reference, December 28, 1993.
- 7 LaClair, Joseph, Bay Design Analyst, BCDC, letter dated May 5, 1994, in response to the Notice of Preparation for the EIR.
- 8 *Ibid.*
- 9 Storm Water Quality Task Force, *California Storm Water Best Management Practice Handbooks*, March, 1993.
- 10 *California Environmental Quality Act, Statute and Guidelines*, Appendix G, 1992.

4.9 NOISE

SETTING

Existing Noise Sources

The project site is currently undeveloped and contains no existing sources of noise. However, several major sources of noise exist in the project site vicinity including traffic on the Interstate 880 ("I-880") and Oakport Street to the east, traffic on Hassler Way to the south, and railroad operations along the railroad spur tracks to the west. In addition, commercial and general aviation aircraft operate on runways at Metropolitan Oakland International Airport ("MOIA") that are about 1.5 miles southwest of the project site. The primary noise source influencing the site's noise environment is I-880.

Existing Noise Levels

In order to characterize the current noise environment at the project site, noise measurements were taken at two locations on the site:¹ (1) near the southern property boundary, approximately 100 feet west of Oakport Street centerline; and, (2) near the northwest corner of the property near Damon Slough. The measurement locations are shown on Figure 4.9-1. Noise levels were measured over a 24-hour period and existing 24-hour CNEL² noise levels ("Community Noise Equivalent Levels") were calculated for the site using appropriate evening and nocturnal factors. Existing noise levels at the site are as follows:

TABLE 4.9.1: EXISTING PROJECT SITE NOISE

<u>Measurement Location</u>	<u>Distance from Roadway Centerline (C/L)</u>	<u>CNEL^a</u>
(1) Southeastern Portion of Site	100 feet west of the centerline of Oakport Street	70.6 dBA ^b
(2) Northwest Corner of Site near Damon Slough	525 feet west of the centerline of Oakport Street	60.2 dBA

/a/ Noise sources included auto and truck traffic on I-880, Oakport Street, and Hassler Way. No railroad operations occurred during measurement period.

/b/ The decibel (dB) is a logarithmic unit used to quantify sound intensity. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting" written as "dBA".

These noise levels are attributable almost exclusively to traffic noise. Railroad operations on the tracks located along the western project boundary could also generate noise at the project site.

However, this railroad track is a spur line that only serves users located along the track. This track currently accesses two users, only one of which is actively receiving railcars.³ The limited use of the line combined with the typical slower travel speeds on spur lines (as trains are delivering a few cars, not traveling on through routes) would limit the railroad train noise generation to periodic noise events. Such events would not influence the 24-hour CNEL noise level at the site.

Noise levels associated with MOIA were determined in 1986 as part of its Master Plan Update Environmental Inventory.⁴ The estimated noise contours indicate that elevated noise levels (above 65 dBA CNEL) associated with airport operations are confined to areas southwest of Doolittle Drive. Since the project site is located approximately 0.75 miles east of Doolittle Drive, airport-related noise does not contribute substantially to the existing noise environment at the site.

Existing Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. Uses generally considered as sensitive noise receptors include hospitals, schools, parks/natural recreation areas, and residences. There are no hospitals, schools, or residences in the project site vicinity. However, natural recreation areas of the Martin Luther King, Jr. Regional Shoreline are located adjacent to the northwest corner of the project site. The natural areas extend to the north and south of Damon Slough following the Bay Shoreline (See Section 4.1, Figure 4.1.1).

The City of Oakland's Noise Element identifies an area adjacent to the site as subject to a "noise-relevant circulation issue." The identified area includes recreation areas of the Martin Luther King, Jr. Regional Shoreline, as well as San Leandro Bay itself. The Noise Element identifies the potential for noise concerns in this area due to "several possible new or expanded trafficways (and a possible airport-access transit route) which have been under consideration in the vicinity of San Leandro Bay." The Noise Element indicates the potential for adverse noise impacts on at

least some of the recreational uses associated with the Martin Luther King, Jr. Regional Shoreline. In 1974, it was anticipated that the shoreline park would accommodate a variety of recreational uses, including active uses such as boating, and passive uses, such as birdwatching or picnicking, in which some degree of quiet would be desirable .⁵

Regulatory and Policy Framework

In its noise regulations, the City of Oakland recognizes the variable sensitivity of certain activities to noise. The City therefore established noise exposure criteria that identify acceptable noise levels for different land use categories.

The City uses noise and land use compatibility guidelines established by the State of California (see Table 4.9-1). For commercial uses, these state guidelines indicate that noise levels up to 70 dBA (Ldn or CNEL) are considered normally acceptable. “Normally acceptable” is defined as satisfactory for the specified land use, assuming that normal conventional construction is used in buildings. State guidelines identify noise levels up to 75 dBA (Ldn or CNEL) as normally acceptable for water recreation.⁶

Although state guidelines do not include noise criteria for extensive natural recreation areas, noise guidelines contained in the City’s Noise Element include noise and land use compatibility guidelines established by the U.S. Department of Housing and Urban Development (HUD).⁷ These guidelines define the maximum acceptable noise levels for extensive natural recreation areas. Noise levels up to 60 dBA (CNEL) are considered clearly acceptable for extensive natural recreation areas. Noise levels between 60 and 75 dBA (CNEL) are defined as normally acceptable for natural recreation areas. “Normally acceptable” is defined by City guidelines as levels at which noise exposure is of some concern, but conventional building construction would be considered adequate to provide an acceptable indoor noise environment.

IMPACTS AND MITIGATION

Significance Criteria

The potential significance of noise impacts identified below is determined by applying two criteria to existing and projected noise levels at the site and adjacent areas:

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L dn or CNEL, db					
	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes						
Residential - Multi Family						
Transient Lodging- Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional						
Industrial, Manufacturing Utilities, Agriculture						

INTERPRETATION



Normally Acceptable

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Clearly Unacceptable

New construction or development should generally not be undertaken.

- (1) The City-adopted state land use compatibility guidelines for commercial and water recreation uses and City guidelines for extensive natural recreation areas; and
- (2) A determination of whether the incremental noise increase would be noticeable to most people. A 10-dBA incremental noise increase is perceived by most people to be a doubling in the loudness of a sound. A 5-dBA increase is readily noticed by most people, while a 3-dBA increase is barely noticeable to most people.

Impact 4.9-1: Proposed project construction would result in the exposure of Martin Luther King, Jr. Regional Shoreline recreation facility users to temporary noise peaks that would be perceived as intrusive. (SIGNIFICANT)

During the estimated six month project construction period, temporary noise increases would result from the operation of heavy equipment. Construction noise sources range from about 78-81 dBA for compressors and generators to about 90-110 dBA for noise peaks from a pile driver (measured at 50 feet from the source). The rate of attenuation is about six decibels (dBA) for every doubling of distance from a point source. Noise levels (noise levels at 50 feet from the noise source) for several types of typical construction equipment and potential noise attenuation are shown below in Table 4.9-2.

Potential sensitive receptors in the project vicinity would be users of recreation facilities and trails in the portion of the Martin Luther King, Jr. Regional Shoreline near the northwest corner of the project site. As noted in the discussion of the environmental setting above, the City's Noise Element recognizes the Martin Luther King, Jr. Regional Shoreline as subject to a "noise-relevant circulation issue" and identifies its recreational uses as potentially susceptible to adverse noise impacts. The Noise Element notes that "some degree of quiet will be desirable" for most activities in the Regional Shoreline. The closest trail and picnic facilities associated with this recreation area are at Garretson Point, which is located approximately 700 feet west of the northwest corner of the site. At this distance, construction-related noise would range between 54 and 64 dBA. However, if pile driving is required, noise peaks of 77 dBA could occur at these recreational facilities.

TABLE 4.9-2: TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

<u>Equipment</u>	<u>Typical Noise Level (dBA) at 50 Feet</u>
Earthmoving	
Front Loader	79
Backhoe	85
Dozer	80
Tractor	80
Scraper	88
Grader	85
Paver	89
Materials Handline	
Concrete Mixer	85
Concrete Pump	82
Crane	83
Stationary	
Pump	76
Generator	78
Compressor	81
Impact	
Pile Driver	101
Jack Hammer	88
Rock Drill	98
Pneumatic Tools	86
Other	
Saw	78
Vibrator	76

SOURCE: U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.

A noise peak of 77 dBA would be perceived as intrusive and annoying by recreation facility users. The noise peaks would occur only during construction of Buildings A, B, C, and D in the northern portion of the project site. Depending on construction sequencing, noise effects from construction of Building D could be buffered by Buildings A, B, and C. Noise resulting from construction of the proposed Price-Costco store would be blocked from the shoreline recreation sites by the existing Grand Auto warehouse.

Mitigation Measure 4.9-1: The project sponsors shall implement the following mitigation measures to decrease noise associated with pile driving activities:

- **Pre-drill holes (if possible based on analysis of site soils) for piles to the maximum feasible depth to minimize the extent of pile driving necessary to construct project structures.**
- **Shroud or shield impact noise due to pile driving in accordance with the manufacturer's recommendations.**

(Identified in the EIR)

Impact 4.9-1 Level of Significance with Mitigation: Less than Significant.

Impact 4.9-2: Implementation of the proposed project would result in noise increases along local roadways serving the proposed project. (Less than Significant)

Development of the proposed project would result in traffic increases on Oakport Street and Hassler Way. Traffic noise increases associated with the proposed project are presented in Table 4.9-4. As indicated in this table, project-related and cumulative noise increases on surrounding streets would range between 0.2 to 2.8 dBA. Such increases would not be noticeable to most people and would not be considered significant. In addition, the high ambient noise levels along these streets due to their proximity to I-880 and the general lack of sensitive receptors along this street would further reduce the potential for significant impact. A hotel and a movie theater are located at the south end of Oakport Street near Hegenberger Road; however, existing noise levels at these uses are less than 65 dBA (CNEL) because they are set back from the road. City noise guidelines for these uses indicate that noise levels of less than 70 dBA (CNEL) are considered conditionally acceptable. Noise levels at these uses would continue to be conditionally acceptable with the proposed project.

Mitigation Measure 4.9-2: None required.

Impact 4.9-3: Project commercial uses within 170 feet of Oakport Street would be subject to noise levels that would be considered "conditionally acceptable" according to City of Oakland land use guidelines. (Less than Significant)

Existing and future noise levels at the project site would be considered conditionally acceptable for proposed commercial uses located within approximately 170 feet of the centerline of Oakport Street, according to City land use compatibility guidelines (see Figure 4.9.2). The proposed Price-Costco building would be located approximately 170 feet from the centerline of Oakport Street. The Price-Costco building would be subject to noise levels of approximately 68 dBA (CNEL), which is considered conditionally acceptable for commercial uses under City guidelines.

Buildings A, B, and C in the northern portion of the site would be about 300 feet from the Oakport Street centerline and would be subject to noise levels of approximately 64 dBA (CNEL), which is considered normally acceptable for commercial uses under City guidelines.

Building D, which would be located 100 feet from the centerline of Oakport Street, would be subject to the highest noise levels. Noise levels at this building would be about 72 dBA, which is considered conditionally acceptable under City guidelines.

According to the City's guidelines, proposed uses that would experience noise levels deemed conditionally acceptable should be developed only after a "detailed analysis of noise reduction requirements" is carried out (see notes, Figure 4.9.2). Noise levels at both the proposed Price-Costco store (68 dBA CNEL) and at proposed Building D (72 dBA CNEL) would be conditionally acceptable and thus would require evaluation of potential noise reduction measures that could be incorporated into building designs and/or operating procedures. However, according to the City's guidelines, conventional construction with closed windows and fresh air supply systems or air conditioning "will normally suffice" to maintain acceptable interior noise levels (see notes, Figure 4.9.2). The typical design of Price-Costco buildings, which limits or eliminates windows, likely would be adequate to maintain acceptable interior noise levels.

Mitigation Measure 4.9-3: Pursuant to City of Oakland guidelines, the project sponsor shall submit a detailed noise reduction analysis to the Director of City Planning to ensure that interior noise levels in the proposed Costco store and Building D would meet City standards for commercial development. The project sponsor shall implement the plan as approved by the City. (Identified in the EIR)

Impact 4.9.3 Level of Significance with Mitigation: Less than Significant.

TABLE 4.9-3: PROJECT-RELATED NOISE INCREASES ON LOCAL ROADWAYS¹

<u>Location</u>	<u>Noise Level (CNEL) at 50 feet from Roadway Centerline</u>			
	<u>Existing</u>	<u>Existing + Project Without Events</u>	<u>Existing + Projects With Events</u>	<u>Cumulative With Events</u>
Oakport Street				
- North of 66th Ave.	60.5	61.9	61.9	61.9
- South of 66th Ave.	66.3	68.9	68.9	68.9
- South of Hassler Way	63.7	64.0	64.0	64.0
- North of Hegenberger Rd. ²	64.8	65.7	65.7	65.7
66th Avenue				
- East of I-880 Northbound Ramps	68.8	69.0	71.2	71.6
Hassler Way				
- West of Oakport Street	63.0	63.7	63.7	63.7

¹ These noise levels do not include the high ambient noise levels due to I-880 traffic in the vicinity of these road segments because the noise contribution by this source can vary due to changes in travel speeds that can result from traffic congestion. The purpose of these noise levels is to provide an indication of the relative change in noise due to the project and cumulative development, not to reflect actual ambient noise conditions along these road segments after project development. The actual noise level changes along these road segments due to the project would be less than those indicated above because freeway traffic noise would dominate the noise environment. Actual ambient noise levels will be determined more by the variation in noise levels generated by freeway traffic than by project traffic.

²Noise levels shown for this road segment also include noise levels generated by I-880 at this location. The freeway noise level is based on noise measurements taken between Oakport Street and the I-880 southbound off-ramp (north of their intersection) in 1992 (Environmental Science Associates, Inc., *City of Oakland Enterprise Zone Environmental Impact Report*, October 28, 1992.) While the project would result in a substantial traffic increase on this road segment, the actual increase in noise would be less than significant due to the high ambient noise levels generated by freeway traffic.

SOURCE: Orion Environmental Associates; Environmental Science Associates, Inc.

Impact 4.9-4: Project operation would increase noise levels at the project site due to on-site vehicle circulation, commercial loading/unloading activities, site maintenance equipment and stationary noise sources. (Less than Significant)

On-site vehicle circulation, truck loading and unloading activities, site maintenance activities, and stationary noise sources would increase ambient noise levels at the site. Site maintenance activities would include the use of blowers or sweeping machines and other equipment associated with site maintenance. Stationary noise sources would include heating, ventilation, refrigeration and air conditioning system fans and compressors, transformers, and other cooling fans. Whether such sources would exceed the City noise guidelines would depend upon system and equipment design, the time of day this equipment is operated, and proximity to sensitive noise receptors.

While the combined 24-hour noise level resulting from these sources cannot be accurately quantified due to variations in potential equipment and system design, it is anticipated that Buildings A, B and C would block most noise associated with parking circulation and operation of maintenance equipment in parking lots from the adjacent Martin Luther King, Jr. Regional Shoreline recreation area. However, the loading docks for these buildings are proposed on the west side of the building facing the shoreline recreation area. Noise levels due to loading activities are variable, but typically do not exceed 60 dBA (Leq)⁸ at 100 feet. It is currently unknown where stationary equipment would be located, but noise from fans associated with such equipment can typically exceed 56 dBA (Leq) at 100 feet. The closest recreational facilities are located approximately 700 feet west of the western project boundary. At this distance, noise levels associated with these uses (combined and individually) would remain below 45 dBA (Leq). Such noise levels would not be expected to increase ambient noise levels in the vicinity of the existing recreational facilities, and would not exceed the City's noise guidelines for extensive natural recreation areas.

Mitigation Measure 4.9-4: None required.

NOTES - Noise

- 1 Noise monitoring was conducted at the site on Thursday and Friday, September 9 and 10, 1993. Noise measurements were taken using two Larson-Davis Labs (LDL) Model 700 sound level meters.
- 2 CNEL stands for Community Noise Equivalent Level, which is a 24 hour noise descriptor. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that for planning purposes, an artificial dBA increment be added to evening and nighttime noise levels. The City of Oakland's noise guidelines are based on both the CNEL and Ldn descriptors. Ldn is similar to "CNEL" in that they both add a 10-dBA penalty to all noise events between 10:00 pm and 7:00 am; CNEL also adds a penalty during the evening hours between 7:00 pm and 10:00 pm. In practice, Ldn and CNEL usually do not differ by more than one to two dBA at any given location.
- 3 Rob Lewis, Operating Department, Southern Pacific Railroad, Telephone Communication, May 11, 1994.
- 4 Port of Oakland, *FAR Part 150 Noise Compatibility Program*, 1988.
- 5 City of Oakland, *Noise Element*, September 1974.
- 6 State of California, Governor's Office of Planning and Research, *General Plan Guidelines*, 1990.
- 7 City of Oakland, *supra n. 5*.
- 8 Leq, the energy equivalent noise level, is a steady-state energy level which represents the acoustical energy of a given measurement period that is equal to the actual time-varying sound level measured during the same period.

4.10 BIOLOGICAL RESOURCES

Sources used in the preparation of this section include information gained from field reconnaissance, records from the California Natural Diversity Data Base,¹ review of pertinent biological literature,² consultation with the California Department of Fish and Game,³ and consultation with the U.S. Fish and Wildlife Service.⁴ Vegetative communities and wildlife habitats were identified and characterized based on field surveys conducted in October 1993 and in February and March 1994. Other documents that serve as general references are: Environmental Science Associates "Potential Wetland Communities- MOIA 1993",⁵ "Special Status Plants and Animals- MOIA 1993",⁶ "Aquatic Biota- MOIA 1993",⁷ "Regulatory Framework - MOIA 1993",⁸ "General Wildlife Habitat and Use- MOIA 1993",⁹ "Hydrophytic Plant Communities- MOIA 1993"¹⁰ and H.T. Harvey and Associates "Biological Assessment - Airport Roadway Project - 1993".¹¹

SETTING

Regional Setting

The project site represents a highly modified land form and is surrounded by urbanized areas of the Cities of Alameda, Oakland and San Leandro. Remnant natural communities occurring in the project site vicinity comprise wetlands, including tidal salt marsh and lagoon, non-tidal salt marsh and drainages, seasonal wetlands, panne mudflats, and open water, as well as terrestrial habitats, such as ruderal uplands, sand dunes, and landscaped areas. These habitats are used by a variety of both common and special status species (e.g., species having some degree of regulatory or policy protection), including numerous bird species and some terrestrial and marine mammals. The urban environment, including landscaped areas associated with development and golf courses, is of little habitat value to wildlife. The open waters of the bay provide foraging habitat for a large variety of water birds, including fish-eating birds such as loons and cormorants.

Project Site

The project site was mapped in 1855 as salt marsh¹² (refer to Figure 4.10.1). The salt marsh was situated on estuarine and alluvial deposits that formed shoals in the quiet waters. Judging by the pattern of sloughs, the highest elevation of this marsh was found along the shoreline and at the edges of sloughs. The deposits of this "berm" were believed to be sand and shell fragments together with smaller sand, silt and clay particles. The berm probably reached elevations of



Coliseum Shoreline / 930397 ■

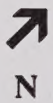
SOURCE: U.S.G.S. Survey Map

Figure 4.10.1
Historic Bay Tidelands

between 3.3 and 3.5 feet National Geodetic Vertical Datum ("NGVD"), or 0.2 feet higher than the marsh plain. The salt marsh plant community was Northern Coastal Salt Marsh and the dominant species was common pickleweed (*Salicornia virginica*), usually occurring in mosaic with salt grass (*Distichlis spicata* var. *stolonifera*) and fleshy jaumea (*Jaumea carnosa*). The natural berm would have supported these species in addition to gumweed (*Grindelia humilis*), California sea-lavender (*Limonium californicum*), and California cord grass (*Spartina foliosa*). Other salt marsh species occurring where more freshwater was available would have included alkali heath (*Frankenia grandifolia*) and sea plantain (*Plantago maritima* var. *maritima*).

The area to the south of Damon Slough that includes the project site has been closed to tidal action since around 1900, the date of publication of a U.S. Coast and Geodetic Survey map (T-2486) showing the area with a perimeter levee. The site remained unfilled, however, until approximately 1950 when the first fills were placed on-site for the construction of I-880 (refer to Figures 4.10.2 and 4.10.3). Aerial photographs establish that the project site was diked before April 24, 1947.¹³ The project site was then filled over a period of years, with surcharges of fill continuing until recently. Based on the available aerial photography, the major portion of the fill on the project site appears to have been placed prior to April 14, 1950.¹⁴ The last fill was placed in the northwestern portion of the site prior to April 20, 1992.¹⁵ According to the Port of Oakland, the most recent fill consisted of approximately 500 cubic yards of dredge spoils and was placed in the northwestern portion of the site in 1991.¹⁶

On-site fill is generally contoured to form a "crown," with the site sloping to the east and the west from its higher elevation north-south centerline. The highest elevation on-site is 16.5 feet, Port of Oakland Datum which translates to 13.3 feet NGVD because the Port's Datum is 3.2 feet below the National Geodetic Vertical Datum. This elevation is located at the northern end (nearest Damon Slough), while the lowest elevation occurs at the southwest corner and is 5.5 feet NGVD and thus above the high tide line which is 5.01 feet NGVD.¹⁷ The majority of the site drains from the center of the site to the east, where water is collected in a non-tidal drainage channel. In the western part of the site, seasonal rainfall drains from the center of the site and is ponded and retained in man-made settling basins and non-tidal ditches that have formed excavated temporarily flooded palustrine emergent wetlands along the site's western border. A single culvert was installed in 1985 in the southwest corner of the site to drain the settling basins in the low area.¹⁸ This culvert was clear at the time of the surveys. All on-site ditches and settling basins are subject to periodic grading for maintenance purposes. There are no "navigable waters" subject to jurisdiction under Section 10 of the Rivers and Harbors Act on the project site.



SOURCE: Pacific Aerial Surveys

Coliseum Shoreline / 930397 ■

Figure 4.10.2
1947 Aerial Photograph of the
Coliseum Shoreline Project Site



SOURCE: Pacific Aerial Surveys

Coliseum Shoreline / 930397 ■

Figure 4.10.3
1950 Aerial Photograph of the
Coliseum Shoreline Project Site

The man-induced palustrine emergent wetlands on-site are isolated from Damon Slough by the higher fill at the northern end of the site. The site is surrounded on three sides by development and receives regular disturbance from seasonal horse shows and pumpkin and Christmas tree markets that eliminates natural habitat values for local and/or regional wildlife. The site does not provide habitat for special status plant or animal species.

Vegetation

Plant communities have been grouped into two general types: wetlands, which potentially fall under the jurisdiction of the U.S. Army Corps of Engineers ("COE") pursuant to Section 404 of the Clean Act Water Act, and non-wetlands or upland, which would not come under COE jurisdiction. Because the present plant communities occurring on site are determined by a number of human activities, descriptions in this section stress function rather than origin.

Wetlands are defined by the COE and EPA as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Areas that do not meet criteria for definition as wetlands or other waters are defined here as non-wetland, or, at higher elevations, as upland.

On October 13, 1993, a systematic sampling of wetland plant communities and "other waters" (Section 404 jurisdiction) was conducted at the project site. The total area surveyed was 22.591 acres. Wetlands were delineated through field reconnaissance, interpretation of aerial photographs, and review of soil survey maps encompassing the project site¹⁹. A complete copy of the wetland delineation, including methods and data sheets, is on file and available at the City.

In all, 30 data points along 15 transects were examined to establish conditions of vegetation, soil, and hydrology. The results of that assessment revealed that a total of approximately 2.2 acres of wetlands occur on the site.²⁰ Also, the assessment found no "navigable waters" on the site. All of the areas described as wetlands in this mapping may be described as man-induced palustrine emergent wetlands that have formed within stormwater treatment facilities that were constructed on dry land and include drainage ditches and settling basins. Based on the field surveys, as well as additional historical and technical information, the palustrine emergent wetlands on the project site appear to be exempt from the jurisdiction of the COE. Specifically, the man-induced wetland areas

work in conjunction with the purposely graded crown traversing the long axis of the property to drain stormwater away from major portions of the site. These areas should be exempt from regulation as they were excavated on dry land (fill material) and serve to convey non-tidal drainage. ... [The] resulting depressional areas have not been abandoned but have been periodically maintained to serve as settling basins which collect and retain stormwater and sediment ..."²¹

The preamble to the COE's regulations published in the *Federal Register* November 13, 1986 stipulates that certain areas that meet the technical definition of a wetland are generally not regulated. According to the 1986 preamble, such areas include:

- (a) Non-tidal drainage and irrigation ditches excavated on dry land.
- (c) Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- (e) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.²²

The exemption from regulation of certain areas that may meet the technical definition of wetlands, as provided in the 1986 preamble, has been upheld in federal court and followed by the San Francisco District Office of the COE. Relevant case law supporting application of the preamble stipulations includes *Golden Gate Audubon Society v. U.S. Army Corps of Engineers*²³ and *Leslie Salt Co. v. U.S.*²⁴ In addition, the San Francisco District Office of the COE has implemented the 1986 preamble's provisions in jurisdictional determinations for the East Third Street property in Foster City and for certain portions of the Foster City Metro Center.²⁵

Results of the investigation of wetland plant communities at the project site are shown on Figure 4.10.4. The vegetation of the seasonal, man-induced wetlands on-site consists of native and non-native plants. Dominant species occurring in on-site wetlands include the following: Mediterranean barley (*Hordeum hystris*), cutleaf plantain (*Plantago coronopus*), English plantain (*Plantago lanceolata*), perennial ryegrass (*Lolium perenne*), crab grass (*Cynodon dactylon*), tarweed (*Hemizonia pungens*), curly dock (*Rumex crispus*), bird's-foot trefoil (*Lotus corniculatus*), rabbit's-foot grass (*Polypogon monspeliensis*), alkali heath (*Frankenia grandifolia*), and bristly ox-tongue (*Picris echioides*). Many of these plants are perennial, remaining alive for more than one year but withering after the growing season from the lack of water from late spring to late fall. Most of these plants would be regarded as ruderal, or "weedy," species. The exceptions to this designation would be plants such as alkali heath, which is a native salt marsh plant.

The remaining portions of the site are categorized as non-wetland upland. These areas lack the necessary wetland hydrology to support wetland plants. The areas are covered with a mixture of native and introduced grasses and herbs. Plants characteristic of these non-wetland areas are wild oats (*Avena barbata*), hare barley (*Hordeum leporinum*), soft chess (*Bromus mollis*), rip gut brome (*Bromus carinatus*), black mustard (*Brassica niger*), wild radish (*Raphanus sativus*) and coyote brush (*Baccharis pilularis* var. *consanguinea*). These areas also include large numbers of plants of the seasonal wetland species discussed above. These species are believed to occur in upland areas of the site because the salinity of the surface of the dredge spoils restricts the growth of upland species and thereby allows the salt-tolerant species to compete successfully.

Wildlife Use of the Project Site

Wildlife habitats are not as clearly defined as vegetative communities, which are defined by substrate, hydrologic regime, and by certain plant species adapted to these environmental conditions. Wildlife habitats consist of an area or place where an organism lives, composed of various vegetation communities that create different areas for different life cycle needs, such as foraging areas. Nesting bird species that may use the man-induced palustrine emergent wetlands on-site and waters of Damon Slough include migratory and resident shorebirds such as willet (*Catoptrophorus semipalmatus*), lesser yellowlegs (*Tringa flacipes*), dowitcher (*Limnodromus arises* and *scolopaceus*), least sandpiper (*Calidris minuilla*), western sandpiper (*Calidrris mauri*), dunlins, godwits and plovers; wading birds such as American avocet (*Recurvirostra americana*), American bittern (*Botaurus lentiginosus*), black-crowned night-heron (*Nycticorax nycticorax*), green-backed heron (*Butorides striatus*), great egret (*Casmerodius albus*), great blue heron (*Ardea herodias*), and black-necked stilt (*Himantopus mexicanus*). Waterbirds that may forage on the site include species such as northern pintail (*Anas acuta*), mallard (*Anas ptyrhychos*), ruddy duck (*Oxyura jamaicensis*), gadwall (*Anas strepera*), scooters (*Melanitta* sp.), lesser scaup (*Aythya affinis*), bufflehead (*Bucephala albeola*), and common goldeneye (*Bucephala clangula*). Mammal species that use the site, particularly during the drier periods of the summer months, include ground squirrels, jack rabbits (*Lepus californicus*), house mice, California vole, raccoon, and skunk. Common amphibians, reptiles, and invertebrates are also likely to occur on the site, such as California slender salamander (*Batrachoseps attenuatus*), California newt (*Taricha torosa*), and western toad (*Bufo boreas*).

Adjacent to the project site in the waters of Damon Slough, marine vertebrates such as harbor seal, smelt, anchovy, perch, sole, flounder, halibut and a variety of migratory anadromous fish, as well as marine invertebrates such as clams, mussels and amphipods are expected to occur (at least on an occasional basis).

Bird species that are common in the upland portion of the site include European starling, white-crowned sparrow, house finch, house sparrow, and western meadowlark. Small mammals such as deer mouse (*Peromyscus maniculatus*) and California meadow mouse (*Microtus californicus*) and reptiles including western fence lizard (*Sceloporous occidentalis*) and gopher snake (*Pituophis melanoleucus*) also utilize this habitat. Raptors that may occasionally forage on-site include American kestrel, red-tailed hawk, and northern harrier.

Special Status Species

Special status species are defined for the purpose of this document to include species in the following categories, including those considered to meet California Environmental Quality Act ("CEQA") *Guidelines* Section 15380 criteria as rare, threatened or endangered and those of other public concern:

Rare, Threatened, or Endangered Species (Section 15380 criteria)

- Plants that are listed or proposed for listing as rare, threatened, or endangered under the California Endangered Species Act or federal Endangered Species Act;
- Animals that are listed or proposed for listing as threatened or endangered under the California Endangered Species Act or federal Endangered Species Act;
- Plants or animals that are Candidates (Category 1 or 2) for possible future listing as threatened or endangered under the state or federal Endangered Species Act;
- Plants included on lists 1A, 1B, and 2 of the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Smith and Berg, 1988). The California Department of Fish and Game ("CDFG") recognizes that Lists 1A, 1B, and 2 of the CNPS inventory contain plants that, in the majority of cases, would qualify for state listing, and CDFG requests their inclusion in EIRs as necessary;

Special Concern (not meeting Section 15380 criteria)

Even though the following are listed as not meeting the Section 15380 criteria, the Lead Agency may decide to consider impacts to these species to be significant under CEQA:

- Animals designated by the California Department of Fish and Game as "species of special concern"; and
- Animals that have been designated as "Protected" or "Fully Protected" by the federal government under law (e.g., Bald Eagle Protection Act).
- Plants included on lists 3 and 4 of the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Smith and Berg, 1988). Plants occurring on CNPS Lists 3 and 4 are "plants about which more information is

needed," and "plants of limited distribution," respectively (Smith and Berg, 1988). These plants may be included as special-status species on the basis of local significance or recent biological information;

- Plants or animals which have been identified as being of local or regional interest.

The CDFG and U.S. Fish and Wildlife Service ("USFWS") share responsibility for the management and protection of biological resources in the study area. Under separate State and federal statutory authorities, each agency conducts a detailed review of any project that could affect a special status plant or animal species. If a listed species may be adversely affected, the lead agency initiates a formal consultation with the USFWS and/or CDFG, as applicable under federal or State law.

Based on data in the CNDDDB,²⁶ consultation with the CDFG,²⁷ review of CNPS literature,²⁸ consultation with the USFWS,²⁹ and review of biological literature relevant to the project site and its vicinity,³⁰ a list of special status plant and animal species reported to occur within the site vicinity was compiled and is included in this section of the EIR as Table 4.10.1. Of the 22 sensitive plant and 33 sensitive animal species identified within the project region, no sensitive species have been identified as having potential to occur on the project site.

Potential habitat for California brackishwater snail (*Tryonia imitator*; federal category 2 candidate) and San Francisco forktailed damselfly (*Ischnura gemina*; federal category 3c candidate) may occur adjacent to the site within the channel of Damon Slough.³¹

Regulatory and Policy Framework

City of Oakland

The following plans and goals of the City of Oakland, as set forth in its *Comprehensive Plan*, are potentially applicable to the proposed project:

- Policy 1. Efforts should be made to perpetuate the full range of plant types and plant communities, and therefore also wildlife variety, found in Oakland. (53298)
- Policy 2. Special attention should be given to the protection of rare and endangered species. (53298)
- Policy 3. Where new development occurs, examples of native vegetation should be retained and, where feasible, large sections should be left undisturbed for ecological, educational, and aesthetic benefit. Where appropriate, the development should incorporate a diversity of suitable new plant materials to provide food and shelter for wildlife. (55637)

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF COLISEUM SHORELINE PROJECT SITE

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
FEDERALLY AND STATE LISTED SPECIES				
Plants				
Alameda manzanita	<i>Arctostaphylos pallida</i>	FC1, CE, 1B	Chaparral	No suitable habitat, presumed absent from the site
Robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	FPE, 1B	Coastal dunes and scrub	No suitable habitat, presumed absent from the site
Presidio clarkia	<i>Clarkia franciscana</i>	FC1, CE, 1B	Coastal scrub and grasslands underlain by ultramafic soils	No suitable habitat, presumed absent from the site
Soft bird's-beak	<i>Cordylanthus mollis</i> sp. <i>mollis</i>	FC1, CR, 1B	Coastal salt marsh	No suitable habitat, presumed absent from the site
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	FC1, CE, 1B	Coastal prairie and native grasslands underlain by clay soils	No suitable habitat, presumed absent from the site
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	FC2, CR, 1B	Protected areas of brackishwater marshes	Not observed during surveys, presumed absent from the site
Adobe sanicle	<i>Sanicula maritima</i>	FC2, CR, 1B	Meadows and grasslands underlain by caly or ultramafic soils	No suitable habitat, presumed absent from the site
Mammals				
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, CE	Forages and breeds in saltmarshes in the Bay Area	No suitable habitat, presumed absent from the site
Birds				
Western snowy plover	<i>Charadrius alexandrius nivosus</i>	FT, CSC	Breeds in isolated dunes and sand accumulations	No suitable habitat, presumed absent from the site

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF THE COLISEUM SHORELINE PROJECT SITE (Continued)

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
Peregrine falcon	<i>Falco peregrinus anatum</i>	FE, CE	Nests on cliffs and forages on shorebirds and passerines	No suitable nesting habitat, foraging for residents and during migration (occasional visitor)
California black rail	<i>Laterallus jamaicensis coturniculus</i>	FE, CE	Nests and forages in dense pickleweed	No suitable habitat, presumed absent from the site
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FE, CE	Nests in islands off the coast of California and forages in open bay and ocean waters	No suitable habitat, presumed absent from the site
California clapper rail	<i>Rallus longirostris obsoletus</i>	FE, CE	Nests and forages in dense pickleweed	No suitable habitat, presumed absent from the site
California least tern	<i>Sterna antillarum browni</i>	FE, CE	Nests and forages in sandy beaches and coastal wetlands	No suitable habitat, presumed absent from the site
CANDIDATE FOR LISTING SPECIES				
Plants				
Pt. Reyes birds-beak	<i>Cordylanthus maritimus ssp. palustris</i>	FC2, 1B	Coastal salt marsh	No suitable habitat, presumed absent from the site
Diablo helianthella	<i>Helianthella castanea</i>	FC2, 1B	Oak woodlands and chaparral	No suitable habitat, presumed absent from the site
Wedge-leaved horkelia	<i>Horkelia cuneata ssp. sericea</i>	FC2, 1B	Coniferous forests and coastal scrub	No suitable habitat, presumed absent from the site
California black walnut	<i>Juglans hindsii</i>	FC2, 1B	Riparian forests and woodlands (extant native stands occur in Contra Costa and Napa counties)	No suitable habitat, presumed absent from the site
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FC1, 1B	Valley grasslands and vernal pools	No suitable habitat, presumed absent from the site
Delta tule pea	<i>Lathyrus jepsonii sp. jepsonii</i>	FC2, 1B	Brackish water marshes	No suitable habitat, presumed absent from the site

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF THE COLISEUM SHORELINE PROJECT SITE (Continued)

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
Hairless allocarya	<i>Plagiobothrys glaber</i>	FC2, CNPS 3	Alkaline meadows and coastal salt marsh	No suitable habitat, presumed absent from the site
Invertebrates				
California brackishwater snail	<i>Tryonia imitator</i>	FC2	Slow moving brackishwater streams, tidal influenced marshes and drainages along the coast	Potential habitat occurs adjacent to the site in Damon Channel.
San Francisco forktailed damselfly	<i>Ischnura gemina</i>	FC3c	Freshwater and brackishwater ditches and drainages supporting emergent vegetation	Potential habitat occurs adjacent to the site in Damon Channel.
Amphibians				
California tiger salamander	<i>Ambystoma tigrinum californica</i>	FC1, CSC	Breeds in freshwater ponds in association with upland areas with small mammal burrows	No suitable habitat, presumed absent from the site
California red-legged frog	<i>Rana aurora draytonii</i>	FC1, CSC	Freshwater ponds and streams with emergent vegetation	No suitable habitat, presumed absent from the site
Reptiles				
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	FC2, CSC	Freshwater ponds and streams	No suitable habitat, presumed absent from the site
Birds				
Tricolored blackbird	<i>Agelaius tricolor</i>	FC2, CSC	Nests in emergent plants or thickets adjacent to freshwater source	No suitable habitat, presumed absent from the site
California horned lark	<i>Eremophila alpestris actia</i>	FC2, CSC	Breeds and winters in open grasslands and pastures	No suitable habitat, presumed absent from the site
Saltmarsh yellowthroat	<i>Geothlypis trichas</i>	FC2, CSC	Nests in freshwater willows and forages in saltmarshes	No suitable habitat, presumed absent from the site

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF THE COLISEUM SHORELINE PROJECT SITE (Continued)

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
Loggerhead shrike	<i>Lanius ludovicianus</i>	FC2, CSC	Nests in open fields and woodlands	No suitable habitat, presumed absent from the site
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	FC2, CSC	Nests on ground near freshwater	No suitable habitat, presumed absent from the site
Long-billed curlew	<i>Numenius americanus</i>	FC3, CSC	Nests near water in prairies and grassy meadows	No suitable habitat, presumed absent from the site
Elegant tern	<i>Sterna elegans</i>	FC2, CSC	Nests on salt marsh dikes and sand beaches	No suitable habitat, presumed absent from the site
Mammals				
Salt marsh wandering shrew	<i>Sorex vagrans halicoetes</i>	FC1, CSC	Breeds in dense canopy of pickleweed with upland areas to escape tides	No suitable habitat, presumed absent from the site
CALIFORNIA SPECIES OF SPECIAL CONCERN				
Birds				
American white pelican	<i>Pelecanus erythrorhynchos</i>	CSC	Nests on ground near bays and inland rivers	No suitable nesting habitat, potential foraging habitat for migrants
Osprey	<i>Pandion haliaetus</i>	CSC	Nests on tall snags and hunts over open water	No suitable nesting habitat, potential foraging habitat for migrants
Sharp-shinned hawk	<i>Accipiter striatus</i>	CSC	Nests in hardwoods and conifers or coastal scrub	No suitable nesting habitat, potential foraging habitat for migrants
Cooper's hawk	<i>Accipiter cooperi</i>	CSC	Nests in hardwood and conifer	No suitable nesting habitat, potential foraging habitat for migrants

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF THE COLISEUM SHORELINE PROJECT SITE (Continued)

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
Northern harrier	<i>Circus cyaneus</i>	CSC	Nests in scrubby vegetation on edges of marshes	No suitable nesting habitat, potential foraging habitat for migrants
Black-shouldered kite	<i>Elanus caeruleus</i>	CP	Nests in dense topped trees in vicinity of marshes and grasslands	No suitable nesting habitat, potential foraging habitat for migrants
Merlin	<i>Falco columbarius</i>	CSC	Nests in oak savannah	No suitable nesting habitat, potential foraging habitat for migrants
California gull	<i>Larus californicus</i>	CSC	Nests on ground near bays and inland rivers	Abundant, not nesting on-site.
Black skimmer	<i>Rynchops niger</i>	CSC	Nests in coastal beaches or sandbars	No suitable nesting habitat, potential foraging habitat for migrants
Short-eared owl	<i>Asio flammeus</i>	CSC	Nests in open grassland	No suitable nesting habitat, potential foraging habitat for migrants
California warbler	<i>Dendroica petechia brewsteri</i>	CSC	Nests in riparian woodlands	No suitable nesting habitat. Migrant yellow warblers occur on-site.
Burrowing owl	<i>Speotyto cunicularia</i>	CSC	Nests in burrows of ground squirrels in grassland	No suitable habitat, presumed absent from site
Mammals				
Harbor seal	<i>Phoca vitulina</i>	CP, MPA	Uses gently sloping gravel areas for resting areas	No suitable nesting habitat, presumed absent from the site

TABLE 4.10.1: SPECIAL STATUS SPECIES OCCURRING IN THE VICINITY OF THE COLISEUM SHORELINE PROJECT SITE (Continued)

Common Name	Scientific Name	Status Federal/State/ CNPS	General Habitat	Project/Potential Occurrence
CALIFORNIA NATIVE PLANT SOCIETY				
Small spikerush	<i>Eleocharis parvula</i>	CNPS 4	Coastal salt marsh	No suitable nesting habitat, presumed absent from the site
Salt marsh gumplant	<i>Grindelia humilis</i>	CNPS 4	Coastal salt marsh	Not located on-site
Pappose spikeweed	<i>Hemizonia parrii</i> sp. <i>congdonii</i>	**	Valley and foothil grassalnds	No suitable habitat, presumed absent from the site
Sea blite	<i>Suaeda californica</i>	CNPS 3	Coastal salt marsh	No suitable habitat, presumed absent from the site

STATUS CODES:Federal Status

- FE = Species in danger of extinction throughout all or significant portion of its range.
 FT = Species likely to become endangered within foreseeable future throughout all or significant portion of its range.
 PE = Species proposed endangered
 FC1 = Candidate information now available indicates that listing may be appropriate with supporting data currently on file.
 FC1* = Candidate information now available indicates that listing may be appropriate with supporting data currently on file; species presumed extinct.
 FC2 = Candidate information now available indicates that listing may be appropriate but supporting data are not currently on file.
 FC 2* = Candidate information now available indicates that listing may be appropriate but supporting data are not currently on file; species presumed extinct.
 FC3c =
 MPA= Marine mammal species which are protected under the Marine Protection Act.

California State Status

- CE = Species whose continued existence in California is jeopardized.
 CT = Species, although not presently threatened with extinction, is likely to become endangered in the foreseeable future.
 CR = Plant species, although not presently threatened with extinction, may become endangered in the foreseeable future.
 CSC = Animal species with California breeding populations that may face extinction in the near future.
 CP = Fully Protected by the State of California under Sections 3511 and 4700 of the Fish and Game Code.

Source: Environmental Science Associates, Inc.

- Policy 4. Marshes and tidal mudflats should be preserved to the fullest extent feasible to provide habitat for fish and wildlife.
- Policy 7. Bay mudflats and marshes should be kept undeveloped to the maximum extent feasible, so that the organic soils which support fish and wildlife habitats there are not disturbed. (55637)
- Policy 12. Viewing and interpretive facilities should be provided where there are significant concentrations of wildlife. These should be carefully located and designed to avoid disrupting the wildlife and its habitat. (53298)
- Policy 13. Wherever practicable, landscaping should include use of native plant species. (55637)

Although the proposed project is consistent with the policies set forth in the *Oakland Comprehensive Plan*, the landscape design along the edge of Damon Slough bordering the project site should be modified to include species native to the region. Species currently proposed to be used in this area may include the following:³²

Trees

Blackwood acacia
Common hackberry
New Zealand Christmas tree
London plane tree
Brisbane box

Shrubs

Edward Goucher abelia
Orchid rockrose
Heavenly bamboo
Red clusterberry
Purple hopseed bush

Evergreen Trees

Lawson cypress
Shore pine
Aleppo pine
Coast redwood

Accent Trees

Upright European hornbeam
Purple leaf plum
Flowering pear

Shrubs

Escallonia
Yaupon
Pacific wax myrtle
Oleander
Swiss Mountain pine
Pittosperum
Yew pine
India hawthorne
Xylosma

Seeded Wildflower/Rough Grass Mix

Mixed variety

Bay Conservation And Development Commission

The Bay Conservation and Development Commission ("BCDC") has jurisdiction over San Francisco Bay tidelands and shorelines within the zone that extends 100 feet inland from mean high tide, as well as over adjacent Bay waters. The following policies from the BCDC Bay Plan could apply to proposed development in the area of the project site within the 100 foot jurisdictional zone adjacent to Damon Slough.

BCDC *Bay Plan* Fish and Wildlife Policies:

1. The benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained.
2. Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes. Such areas on the shoreline are designated as Wildlife Areas on the Plan maps.

BCDC *Bay Plan* Marshes and Mudflats Policies:

1. Marshes and mudflats should be maintained to the fullest possible extent to conserve fish and wildlife and to abate air and water pollution. Filling and diking that eliminate marshes and mudflats should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative. Marshes and mudflats are an integral part of the Bay tidal system and therefore should be protected in the same manner as open water areas.

2. Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects on marshes and mudflats, and then modified as necessary to minimize any harmful effects.

IMPACTS AND MITIGATIONS

Significance Criteria

Appendix G of the CEQA *Guidelines* specifies that a project will normally have a significant impact on the environment if it will conflict with the adopted environmental plans and goals of the community where it is located. Appendix G of the CEQA *Guidelines* states that impacts that normally are considered significant include those that would:

- "substantially affect a rare or endangered species of animal or plant or the habitat of the species";
- "interfere substantially with the movement of any resident or migratory fish or wildlife species"; or
- "substantially diminish habitat for fish, wildlife or plants."

Section 15380 of the *Guidelines* defines "rare or endangered species" as those species officially listed as threatened, endangered, or rare under federal or California law. In addition, the *Guidelines* provide that plant or animal species may be treated as "rare or endangered" even if not on one of the official lists if:

- its survival and reproduction in the wild are in immediate jeopardy;
- the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or
- it is likely to become endangered in the foreseeable future and may be categorized as "threatened" under federal law.

Given those standards, a project would be considered to have a significant adverse impact on biological resources if it would result in substantial disruption to, or destruction of, any special status species meeting CEQA *Guidelines* Section 15380 criteria, or special status animal species habitat or breeding grounds. Special status species are included in this EIR as indicators of a significant impact because they are likely to become endangered in the foreseeable future, or their future populations are dwindling.

A project would also be considered to have a significant impact if it were to result in a substantial loss of important plant or animal species (species of special status, local or regional concern); were to cause a change in species composition, abundance or diversity beyond that of

normal variability; or were result directly or indirectly to in the measurable degradation of sensitive habitats.

Impacts would be generally considered less than significant if the habitats and species affected were common and widespread in the region and the state. Examples include areas supporting non-native grassland or ruderal vegetation.

Project Site

Impact 4.10-1: Development of the proposed project would result in the filling of approximately 2.2 acres of man-induced palustrine emergent wetland habitat on-site. (Less than Significant)

The amount of fill proposed to be placed in excavated, temporarily flooded palustrine emergent wetlands habitat on the site to accomodate the proposed project totals approximately 2.2 acres.³³ The stormwater detention/settling basin facility that is the basis for the wetlands on the site is subject to periodic maintenance. Further, these man-induced wetlands on-site are subject to significant human activity on a year-round and seasonal basis and exist in a severely degraded state.

In and of itself, the loss or adverse alteration of these wetlands does not result in significant effects to wildlife populations or reduce habitat for any rare, threatened, and endangered species. Because of the poor quality and small acreage of wetlands affected, this impact is considered less than significant.

Mitigation Measure 4.10-1: None Required.

Impact 4.10-2: Project development would result in disturbance to, or direct mortality of, common wildlife species. (Less than Significant)

Direct impacts to common wildlife species include both mortality of resident species and habitat loss and degradation. Mortality would include road kills, destruction of burrows of such species as ground squirrels, and destruction of nests of species such as western meadowlarks. Habitat degradation associated with temporary construction-related disturbances may include displacement of animals due to construction noise. These construction and operational-related disturbances would not be considered significant impacts to common wildlife species. This would be a less than significant impact.

Mitigation Measure 4.10-2: None Required.

Impact 4.10-3: Project development would directly destroy or degrade existing common vegetation. (Less than Significant)

Project development will directly destroy or degrade portions of common vegetation occurring on-site. Because the common vegetation supports no special status species, the impacts to common vegetation are considered less than significant.

Mitigation Measure 4.10-3: None Required.

NOTES - Biological Resources

- 1 California Department of Fish and Game 1993, California Natural Diversity Database Rarefind search conducted January 20, 1993.
- 2 Munz, P. A. and D.D. Keck, A California flora and supplement, University of California Press, Berkeley, California, 1970; Holland, R, "Preliminary Outline of Terrestrial Natural Communities of California," Non-game Heritage Program, California Department of Fish and Game, 1986; California Native Plant Society, *California Native Plant Society's inventory of rare and endangered vascular plants of California*, 5th Ed. Special Publication No.1, California Native Plant Society, Sacramento, California, 1994.
- 3 California Department of Fish and Game, 1989 Annual Report on the Status of California's Listed Threatened and Endangered Plants and Animals, 1990.
- 4 Nagano, Chris, Entomologist, U.S. Fish and Wildlife Service, Personal Communication, 6 December 1993.
- 5 Environmental Science Associates, Inc., Potential Wetland Communities on the Metropolitan Oakland Airport (MOIA), Draft, Prepared for the Port of Oakland, 1993a.
- 6 Environmental Science Associates, Inc., "Technical Memorandum #8: Special Status Plants and Animals Existing Environmental Conditions Metropolitan Oakland Airport," Prepared for the Port of Oakland, 1991b.
- 7 Environmental Science Associates, Inc., "Technical Memorandum #9: Aquatic Biota: Existing Environmental Conditions Metropolitan Oakland Airport," Prepared for the Port of Oakland, 1991c.
- 8 Environmental Science Associates, Inc., "Technical Memorandum #1: Regulatory Framework," Prepared for the Port of Oakland, updated April 1991d.
- 9 Environmental Science Associates, Inc., "Technical Memorandum #7: General Wildlife Habitat and Use," Prepared for the Port of Oakland, updated April 1991e.
- 10 Environmental Science Associates, Inc., "Technical Memorandum #6: Hydrophytic Plant Communities," Prepared for the Port of Oakland, updated April 1991f.
- 11 H.T. Harvey and Associates. Biological Assessment - Airport Roadway Project, 1993.
- 12 Olson, Brad, Associate Environmental Planner, Port of Oakland, Personal Communication, 1993.
- 13 Huffman & Associates, Inc., "Investigation of the Presence of Waters of the United States: City of Oakland, California, Prepared for the City of Oakland, California, March 1994.
- 14 *ibid.*

- 15 *ibid.*
- 16 Olson, *supra* n.12.
- 17 High, Karen, Regulatory Branch Staff, U.S. Army Corps of Engineers, San Francisco District, Telephone Communication, 15 November 1993.
- 18 Olson, *supra* n.12.
- 19 Soil Conservation Service, Soil Survey Alameda Area, Western Part, California, U.S. Government Printing Office, March 1981.
- 20 The City of Oakland has contacted the COE concerning their formal jurisdictional determination, but no determination has yet been made for this site.
- 21 Huffman, *supra* n.13.
- 22 51 Fed. Reg., 41,206, 41,217 (13 November 1986)
- 23 796 F. Supp. 1306, 1315 [N.D. Cal. 1992]
- 24 Case No. 89-15244\89-15337
- 25 Huffman, Terry, Huffman & Associates, Letter to Sharon Moreland, U.S. Army Corps of Engineers, "Delineation of Section 404 Jurisdiction for parcel on Oakland Street between Hassler Way and 66th Avenue in the City of Oakland," 29 March 1994.
- 26 California Department of Fish and Game's California Natural Diversity Data Base (CNDDB), data request for the Oakland West USGS quadrangle, 1993.
- 27 California Department of Fish and Game. Annual Report on the Status of the California State Listed Threatened and Endangered Animals and Plants, 1993.
- 28 California Native Plant Society, *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*, 1994.
- 29 U.S. Fish and Wildlife Service, "Endangered and Threatened Wildlife and Plants; Animal Notice of Review," *Federal Register*, 6 January 1994.
- 30 Environmental Science Associates, Inc, *supra* n.8; H.T. Harvey and Associates, *supra* n.13.
- 31 Project implementation should not affect habitat for California brackishwater snail nor San Francisco forktailed damselfly, if present adjacent to the site within Damon Channel.
- 32 See Figure C.1.

- 33 Although the COE has not made a formal determination of their jurisdiction on the project site, it is anticipated that the man-induced palustrine emergent wetlands located in the southern and western portions are not subject to COE jurisdictional authority.

4.11 PUBLIC SERVICES AND UTILITIES

SETTING

Fire Protection

The City of Oakland Fire Department has 29 stations that provide fire protection service throughout the City, including the project site. The fire stations closest to the site are Station 27, located at 8501 Pardee Drive, and Station 29, located at 1016 66th Avenue.¹ The Oakland Fire Department's response time within the proposed project area is typically less than four minutes, which meets the Fire Department's standards. Persons requiring hospital care are transported from the project area by the American Medical Response West.²

Water used for fire-fighting within the project area originates from reservoirs located in the Oakland hills and San Francisco Bay, and is distributed to flatland locations by pump networks through gravity. From the flatland locations, fire truck pumpers draw the water and boost the required pressures necessary to extinguish fires. Additional sources of water are available in inland areas, but these sources are not always adequate for fire fighting purposes due to the age and small size of the existing pipes.³

The Fire Department requires new development to meet hydrant spacing and pressure requirements pursuant to the 1991 Uniform Fire Code. For commercial and industrial uses, fire flow and hydrant spacing requirements are determined on the basis of building square footage and projected building occupancy.⁴

Emergency Medical Aid

Emergency medical services to the City, including the project site are provided by the Alameda County "9-1-1" emergency response system, which is a tiered - response system. For "Non-Life Threatening Emergencies" (Code 2), a paramedic ambulance responds. For "Life-Threatening Emergencies" (Code 1), the local Fire Department is the first responder. A paramedic ambulance provides secondary response.

Alameda County contracts with American Medical Response West, which provides paramedic and ambulance services to 35 cities within Alameda and Contra Costa Counties. American Medical Response West has 750 employees and over 120 ambulances. The ambulances are deployed in accordance with the Systems Status Management, or "Strategic Deployment"

program that deploys ambulance / paramedic units in locations depending on time of day, traffic situations, and likelihood of need (as indicated by past trends). This program is intended to enable the ambulances to reach destinations relatively quickly and efficiently. The County-mandated maximum limit for ambulance response time to targeted destinations is eight minutes. American Medical Response West also provides basic emergency medical services that do not require paramedics.⁵

Should a mass-casualty or disaster situation occur in the project vicinity and American Medical Response West be unable to fulfill all requests for service, the Alameda County Emergency Medical Service would be the responsible agency in charge of coordinating emergency services.⁶

Police Protection

The Oakland Police Department provides preventive patrol and emergency response services for the project site. Currently, the Department is staffed by 707 sworn police officers. The Department is centralized and is divided into five districts, with each district having approximately seven beats. Each district is served by three watches: the early or day watch, the evening watch, and the night watch. Staffing of each watch is determined by the location of the area, the type of crime prevalent in that area and the time of day. Normally, each watch is staffed by several patrol units, with the backing of specialized tactical units.⁷ The project site is located in District 4, on Beat 22 and is served primarily by patrols assigned to that district.⁸ There is a police substation located at 73rd Avenue (the eastern extension of Hegenberger Road).

Currently, the Department's average "critical" response time to highest priority calls ranges from two and one-half to five minutes. Highest priority calls include felonies in progress and other life- or property-threatening emergencies. Although, there are no "typical" calls for police services in the project area, many patrons have experienced burglaries in the Oakland Airport Business Park, along Edgewater Drive.⁹

Parks and Recreation

East Bay Regional Park District

The East Bay Regional Park District ("EBRPD") provides park and recreational facilities within the project vicinity. Martin Luther King, Jr. Regional Shoreline ("Shoreline") is adjacent to the southwest corner of the project site. Damon Slough also becomes part of Martin Luther King, Jr.

Regional Shoreline west of the Southern Pacific Railroad spur tracks. Within the Shoreline, there are several picnic areas connected by a paved multi-use trail bordering San Leandro Bay and the Damon Slough. The Shoreline area also contains Doolittle Pond, and the Damon and Arrowhead Marsh Wildlife Sanctuaries. Activities permitted in designated areas of the Shoreline include picnicking, birdwatching, fishing, boating, hiking and bicycling. The EBRPD does not consider the Shoreline to be overused at this time.¹⁰

Oakland Parks and Recreation Department

The City of Oakland manages the following three parks within the project vicinity: Lew Galbraith Golf Course at 10505 Doolittle Drive; Lew Galbraith Soccer Field at 10505 Doolittle Drive; and, Otis Spunkmeyer Ballfield at Harbor Bay Parkway and Doolittle Drive. The Lew Galbraith Golf Course and the Lew Galbraith Soccer Field are currently planned to serve as a storage site for bay dredge materials and would be closed to the public during the period of this use. After dredging is completed, the Golf Course would be reopened.¹¹ According to the Oakland Parks and Recreation Department, recreational services are adequate to meet demand in the project area and no additional parks are currently planned.¹²

Water Supply

Fresh water is supplied to the project site through 12-inch water mains along Hassler Way and Oakport Street by the East Bay Municipal Utility District ("EBMUD"). Over ninety percent of the water supply for the East Bay originates in the Sierra Nevada mountains, where it is collected and initially stored at the Pardee Reservoir on the Mokelumne River. Water is then channeled to EBMUD via the Mokelumne Aqueduct to the Orinda Treatment Plant; untreated water from the aqueduct is stored for later use as needed in the Briones Reservoir. The project site is in the Central Pressure Zone, which extends from San Lorenzo to Richmond. The Central Reservoir is the principal storage reservoir for the Metropolitan Oakland International Airport ("MOIA") area and has a capacity of 154 million gallons.¹³

Water consumption rates are monitored at a district-wide level rather than by individual communities. In 1986, the latest year for which water consumption data are available, the gross water demand in the district totaled 215 million gallons. This total included metered water and unaccounted water (i.e., water used for fires, water lost due to main breaks, etc.). It is estimated that water consumption levels for the last several years have remained similar to those of 1986.

However, because of the drought, water supply available to EBMUD has generally decreased since 1986.¹⁴

Wastewater

East Bay Municipal Utility District

EBMUD's Special District No. 1 (SD-1), established in 1944, provides treatment and disposal of sanitary and industrial wastewater from El Cerrito, Albany, Berkeley, Emeryville, Piedmont, Alameda and Oakland. The District serves 20,000 commercial and industrial users over an 83-square-mile area. Wastewater from SD-1 is treated at EBMUD's Wastewater Treatment Plant at the foot of the Bay Bridge in Oakland. The Plant's current capacity is 310 million gallons per day ("MGD") of primary treatment and 168 MGD of secondary treatment. Current average dry weather flow is approximately 80 MGD, and average wet weather flow is around 110 MGD.¹⁵ During major storms the Plant's capacity is exceeded. The Plant meets federal and state regulations regarding wastewater quality and disposal. Treated effluent is discharged from the Plant into San Francisco Bay near Yerba Buena Island through a three-mile-long outfall line. The outfall is gravity-fed, except during high tide or high flow periods, when effluent is pumped into the Bay.¹⁶

City of Oakland

The City of Oakland maintains and operates the subsurface sanitary sewer system that collects wastewater from the project site and transports it to the wastewater treatment facilities near the Bay Bridge entrance in Oakland, through the use of interceptors owned and operated by EBMUD. Sanitary sewer service is available to the project site through an existing 10-inch main located along Hassler Way. In addition, there is an existing 10-inch main along the segment of Oakport Street southeast of Hassler Way that does not abut the project site.¹⁷

Storm drain service is available to the project site through an existing 21-inch storm drain at the corner of Oakport Street and Hassler Way, and a 15-inch storm drain along Hassler Way extending approximately 300 feet southwesterly of the Hassler Way/Oakport Street corner. The storm drain sewers, which are separate from the sanitary sewer lines, serve to transport storm water to the treatment facilities.

Wastewater flows can swell by up to 20 times during periods of heavy rainfall, because leaks in the sanitary sewer system allow rainwater percolating through the soil to enter the sanitary system. These flows exceed the hydraulic capacity of the sanitary sewers and interceptors. As a result, back-ups and overflows of diluted sewage can occur along the community's network of man-holes, and unprocessed sewage can be discharged into the Bay. On the average, overflows have been estimated at 180 million gallons per year. The EBMUD system is designed to channel overflows to creeks that drain into San Francisco Bay. The last time an overflow occurred was in the mid-1980's. The dry conditions for the last several years have decreased the number of overflows. Overflows also occur in the City's system, in which case the system overflows through City manholes. EBMUD is implementing a program to increase wastewater treatment and interceptor capacities. As part of this program, four remote treatment plants will be added to the system to handle flows during major storm events only. The Oakport Wet Weather Treatment Plant, just north of the project site, would handle wastewater overflows resulting from the proposed project during heavy rainfall.¹⁸

Solid Waste

Waste Management of Alameda County

Waste Management of Alameda County, formerly Oakland Scavenger Company, maintains an exclusive franchise agreement with the City of Oakland for collection and disposal of solid waste. The Waste Management service area also includes most of Alameda County with a service population of approximately 1,000,000.

Waste Management transports solid waste from the County to the Durham Road and Altamont landfill sites. The site at Durham Road in Fremont receives wastes from the southern portion of the County, while the Altamont landfill, about 35 miles southeast of the project, receives solid waste from the northern portion of the County, including the MOIA area. Waste from the project area is first taken to the Davis Street Recovery and Transfer Station in San Leandro. The Station has a capacity of approximately 5,000 tons per day and currently operates at about 60 percent of capacity during peak periods.¹⁹ From the Station, solid waste is then transported to the 1,600-acre landfill site at Altamont. The Altamont Landfill is a Class 2 facility. Its remaining fully permitted capacity is projected to last until July 2003 to April 2006 (depending on future contracts). Presently, Altamont Landfill is applying for a permit to expand capacity. If the proposed expansion is approved, the total remaining life of landfill can be expected to increase

by more than 50 years. The Altamont Landfill currently receives an average of 5,920 tons of solid waste per day.²⁰

California Integrated Waste Management Act of 1989 (Assembly Bill 939)

California Integrated Waste Management Act of 1989 establishes goals for all California communities to divert 25 percent of all solid waste from landfills by 1995, and 50 percent by the year 2000. The City of Oakland has prepared a Source Reduction and Recycling Element ("SRRE") that includes a solid waste management program to meet the bill's mandated goals. The goal is to be accomplished by source reduction, expanded recycling efforts, composting, and environmentally safe waste transformation. All present or future solid waste flows from the project site must conform to Oakland's SRRE.²¹

Electrical and Gas Services

Electricity customers in the City of Oakland receive electrical power from the Pacific Gas and Electric Company ("PG&E") systemwide transmission grid at seven main substations in various locations in the City. Electrical service to the project site is available through an existing aerial line located along the southwesterly boundary line of the project site. Natural gas service to the project site is also supplied by PG&E through an existing 4-inch gas main along Hassler Way that is fed by a 30-inch main located in Oakport Street.

Communication Service

Pacific Bell currently provides communication services to the project site through an existing aerial cable along the southwesterly boundary line of the project site.

Applicable Plans and Policies

The proposed project is located in, and is subject to local regulations of the City of Oakland's general plan, the *Oakland Comprehensive Plan*. The Policy Plan and the Land Use Element of the *Oakland Comprehensive Plan* contain the following policies applicable to public services and utilities.

Policies on Implementation and Coordination

Policy 4. Electrical, telephone, and related distribution lines should be undergrounded in all commercial and residential areas, except where special local conditions such as

limited visibility of the poles and wires may make this unneeded; in appropriate civic, light industrial, or other areas; and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward eventual undergrounding of all existing lines in such places, and significant utility extensions there such as in new subdivisions should be installed underground from the start.

The Parks and Recreation System

- Policy 1. The City will protect and where appropriate expand its system of park and recreation areas and facilities, and will budget for enough staff to provide adequate recreation programs, hours of operation, and maintenance. (55637)
- Policy 2. The City urges the East Bay Regional Park District and other relevant public agencies and private organizations and firms to improve and expand the recreation facilities and programs appropriate to their respective roles, especially in ways which will help meet the needs of Oakland's deficient neighborhoods and communities. (55637)
- Policy 13. A wide range of boating, fishing, and other public and commercial recreation uses should be provided along Oakland's waterfront. There should be provision for separated wildlife preserves as well as for intensively used recreational area. (55637)

Air, Energy, & Solid Waste Resources

- Policy 1. The City strongly encourages federal, state, regional, and private efforts toward air pollution control, energy development and conservation, and recovery of solid waste resources. (55637)

IMPACTS AND MITIGATIONS

Significance Criteria

Appendix G of the CEQA *Guidelines* states that a project "will normally have a significant effect on the environment if it will ... conflict with adopted environmental plans and goals of the community where it is located ... interfere with emergency response plans or emergency evacuation plans, ... create a potential public health hazard, ... extend a sewer trunk line with capacity to serve new development, ... use fuel, water or energy in a wasteful manner, ... encourage activities which result in the use of large amounts of fuel, water, or energy, [or] conflict with established recreational, educational, religious or scientific uses of the area." Any increases in demand for public services or utilities created by the proposed project would be considered significant if those increases were to result in a reduction of the level of service currently provided to the project site and the surrounding area.

Fire Protection

Impact 4.11-1: Development of the proposed project would incrementally increase the need for fire protection services in the project area. (Less than Significant.)

Although the project would require fire protection services, the project would not adversely affect the level of fire protection service currently provided in the project area.²² The project sponsors would submit project site plans and a fire hydrant location plan to the Oakland Fire Department for formal review regarding the adequacy of access on the site, on-site fire potentials, and the adequacy of onsite fire hydrant locations. To further reduce the potential for adverse impacts on local fire protection services, additional measures are recommended below.

Mitigation Measure 4.11-1: The project sponsors shall install a Fire Department approved automatic fire sprinkler system and other built-in protection, including heat/smoke alarms. The project sponsors shall also install Fire Department approved, electronically monitored fire alarm boxes at key locations on the project site. (Identified in the EIR)

Impact 4.11-1 Level of Significance with Mitigation: Less than Significant.

Emergency Medical Aid

Impact 4.11-2: Development of the proposed project would increase the need for emergency medical aid services in the project area. (Less than Significant)

Although, demand for emergency medical aid services would increase due to the proposed project, American Medical Response West (formerly Regional Ambulance Co.) does not foresee any significant impacts to existing levels of service.

Mitigation Measure 4.11-2: None Required.

Police Protection

Impact 4.11-3: Development of the proposed project would incrementally increase the need for police protection services in the project area. (Less than Significant)

Although the project would generate calls for police services, the project would not adversely affect the level of police protection currently provided in the project area.²³ The project sponsors would submit project site plans to the Oakland Police Department for formal review regarding

the adequacy of access to all structures on the site. To further reduce the potential for adverse impacts on local police protection services, additional measures are recommended below.

Mitigation Measure 4.11-3: The project sponsors shall be required to provide adequate lighting on the site to discourage criminal activity and vandalism. The project sponsors shall also be required to submit written specifications for the hardware to be used on all doors, windows, and door frames to the Police Department. (Identified in the EIR)

Impact 4.11-3 Level of Significance with Mitigation: Less than Significant.

Parks and Recreation

According to the East Bay Regional Park District and the Oakland Park and Recreation Department, current park and recreation resources would be able to accommodate impacts from the proposed project development without any significant impacts to existing levels of service.

PUBLIC UTILITIES

Water Supply

Impact 4.11-4: Development of the proposed project would create an additional demand of approximately 67,000 gallons per day of water. (Less than Significant)

According to EBMUD, this would not be a significant impact, assuming water conservation measures and fire flow demands are met. Additional water demand resulting from the project could be met adequately by the existing water lines. Water service to surrounding areas would not be disrupted.

Mitigation Measure 4.11-4: The proposed project shall incorporate all state and local water conservation requirements and fire flow demands into the project design. Also, both the State of California and EBMUD recommend additional water conservation measures that should be considered by the project sponsors. (Identified in the EIR)

The Department of Water Resources regulates water efficiency standards for plumbing fixtures installed or sold in the State of California. The proposed project must meet the following efficiency standards for all plumbing fixtures installed on the project site:²⁴

<u>Type of Plumbing Fixture</u>	<u>Performance Standard</u>
toilets	1.6 gallons per flush
urinals	1.0 gallon per flush
showerheads	2.5 gallons per minute
lavatory/sink faucets	2.2 gallons per minute
leakage from tub spout diverters	0.1 gallons per minute

In addition, EBMUD recommends ultra-low flow toilets, automatic flushing toilets, water conservation faucets (with automatic shut-off), low flow aerators for all relevant plumbing fixtures as supplementary water conservation measures.²⁵

Impact 4.11-4 Level of Significance with Mitigation: Less than Significant.

Wastewater

Impact 4.11-5: Development of the proposed project would generate 50,000 gallons per day of wastewater. (Less than Significant)

According to EBMUD, the proposed project would generate 50,000 gallons per day or approximately 18.2 million gallons per year based on proposed square footage and current wastewater generation factors for "warehouse" type uses in the Bay Area.²⁶ The City of Oakland has confirmed that based on this estimate, the existing sewer system can accommodate this additional flow without any change in its current service level.

Mitigation Measure 4.11-5: The proposed project shall incorporate all state and local water conservation requirements and fire flow demands into the project design; applicable water conservation measures shall be implemented. (Identified in the EIR.)

Implementation of the above mitigation would accomplish reduction of wastewater generation by reducing the amount of water consumed on the project site.

Impact 4.11-5 Level of Significance with Mitigation: Less than Significant.

Solid Waste

Impact 4.11-6: Development of the proposed project would generate approximately 2.1 tons of solid waste per day.²⁷ (Less than Significant)

Assuming that uses at the proposed project would range from warehouse stores to general retail, the solid waste flow would be approximately 2.1 tons per day. Assuming standard recycling measures in accordance with AB 939, these additional solid wastes would not affect the current level of service provided by Waste Management of Alameda, nor the estimated lifetime of Altamont Landfill site.

Mitigation Measure 4.11-6: The project sponsors shall submit a litter control plan for the project site to the City of Oakland Office of Planning and Building. In addition, the project sponsors, in conjunction with the City, shall review project design for sufficient allocated space and capacity to accommodate an aggressive waste diversion program/recycling program that achieves the diversion levels required under AB 939. (Identified in the EIR)

The City of Oakland Office of Planning and Building requires that the project sponsors submit a litter control plan that is subject to the review and approval of the Director of City Planning prior to operation of a new facility that includes:

- (a) the design, location, and number of litter containers to be installed on the site and in the buildings (said containers shall be installed prior to the start of the activity);
- (b) establishment of a management schedule for keeping the premises and surrounding area within a 15 foot radius of the project site free from litter originated by operation of the activity;
- (c) the imprinting of disposable containers, wrappers, and napkins utilized by project businesses with establishment names and logos.

Compliance with AB 939 can be achieved by coordinating waste and recycling collection through Waste Management of Alameda County.

Impact 4.11-6 Level of Significance with Mitigation: Less than Significant.

Electrical and Gas Services

Impact 4.11-7: Development of the proposed project would create a new demand for electrical and gas services to the project site. (Less than Significant)

According to Pacific Gas and Electric Company (PG&E), the additional demand on PG&E services resulting from the proposed project would have no effect on the current levels of service provided to the project area. The existing gas mains and overhead electrical lines could adequately meet the additional demand that would result from the project.

Mitigation Measure 4.11-7: None Required.

Communication Service

Impact 4.11-8: Development of the proposed project would create a new demand for communication services at the project site. (Less than Significant)

According to Pacific Bell, additional demand on its services resulting from the proposed project would have no effect on the current level of service provided to the project area. The existing overhead communication lines would be adequate to meet project demand.

Mitigation Measure 4.11-8: None Required.

NOTES - Public Services and Utilities

- 1 City of Oakland's Office of Economic Development and Employment, *Request for Proposals, Coliseum Shoreline Project*, April 1993.
- 2 City of Oakland, *Oakland Enterprise Zone Environmental Impact Report*, ER 91-121, SCH No. 920130178, 28 October 1992; Riggs, Earl, Chief Executive Officer, American Medical Response West, facsimile communication, 14 February 1994.
- 3 *ibid.*
- 4 *ibid.*
- 5 Riggs, *supra* n.2.
- 6 *ibid.*
- 7 City of Oakland, *supra* n.2.
- 8 Barnes, Andre, Sergeant, Oakland Police Department, telephone communication, 6 May 1994.
- 9 *ibid.*
- 10 East Bay Regional Park District, Martin Luther King Jr. Regional Shoreline, pamphlet, December 1992; Lindenmeyer, Tom, East Bay Regional Park District, telephone communication, 6 May 1994.
- 11 Port of Oakland, *Oakland Harbor Deep-Draft Navigation Improvements EIR/EIS*, June 1994. (On file with the Port of Oakland)
- 12 Williams, Cleve, Director, City of Oakland's Office of Parks and Recreation, letter, 26 October 1993.
- 13 Kirkpatrick, William R., Manager of Water Distribution Planning, East Bay Municipal Utility District, letter, 2 December 1993.
- 14 City of Oakland, *supra* n.2.
- 15 Girma Elisabeth, Associate Civil Engineer, East Bay Municipal Utility District, letter, 4 November, 1993.
- 16 *ibid.*
- 17 City of Oakland, *supra* n.1.
- 18 Girma, Elisabeth, Civil Engineer, East Bay Municipal Utility District, telephone communication, 10 May 1994.

- 19 Johnson, William M., Division Vice President, Waste Management of Alameda County, letter, 15 October 1993.
- 20 Waste Management of Alameda County, "Annual Tonnage Reports", Altamont Landfill and Resource Recovery Facility, 1993.
- 21 City of Oakland, *Preliminary Draft Source Reduction and Recycling Element and Household Hazardous Waste Element*, September 1991.
- 22 Basada, Phillip, Fire Protection Engineer, Oakland Fire Department, personal communication, June 24, 1994.
- 23 Jones, Sharon, Lieutenant, Community Services Division, Oakland Police Department, personal communication, June 24, 1994.
- 24 Fellas, Pat, Department of Water Resources, facsimile transmission to Marie Galvin, 15 March 1994.
- 25 Swindell, John, East Bay Municipal Utility District, telephone conversation with Marie Galvin, 15 March 1994.
- 26 Wastewater generation factors were estimated by EBMUD based on the average of current wastewater usage for Price-Costco stores in Richmond and San Leandro. (Kimm, Dan, Civil Engineer, East Bay Municipal Utility District, telephone conversation, 10 May 1994.)
- 27 National Solid Waste Management Association, Technical Bulletin #85-6: Basic Data: Solid Waste Amounts, Composition and Management Systems." 1 October 1985.

5.0 ALTERNATIVES TO THE PROJECT

5.1. ALTERNATIVE 1: NO PROJECT

Under the No Project Alternative, the site would remain in its current undeveloped state, as described in the Environmental Setting section of this EIR. The site would continue in City ownership, and would remain available for future development by the City, or other future developer(s) as determined by the City.

Under this alternative, none of the impacts resulting from construction or operation of the proposed project would occur. In addition, the Davis Street Costco in San Leandro could remain open, or could be relocated elsewhere than the project site. The No Project Alternative would be considered an environmentally superior alternative to the proposed project but it would not achieve the project sponsors' objectives, such as developing a successful regional destination retail shopping center; providing general merchandise and discount retail service to the City's residents, workers and small businesses; and strengthening the City's retail base.

Land Use and Policy Analysis

The City of Oakland would lose the opportunity presented by the project to provide employment for local residents, to increase its non-residential tax base, and to enhance its position as a regional center of commerce.

The shoreline area along Damon Slough would not be altered; but existing public access, which is currently minimal, would not be improved.

Population, Employment and Housing

Under this alternative, no new construction, primary or secondary jobs would be created.

Visual Quality

Because this alternative would involve no new construction, it would cause no visual quality impacts.

Traffic, Transportation, Circulation and Parking

Traffic Conditions

Traffic conditions under this alternative are described in Section 4.4, Existing (Year 1993). Even without the proposed project, existing peak-hour levels of service on the southbound and northbound ramps and in intersections at the 66th Avenue and I-880 interchange would be unacceptable and would warrant signalization. Improvements to these intersections that are identified in this EIR would not be implemented.

Transit Conditions

No impact on transit service to the area would result from the no project alternative.

Geology and Seismicity

Because this alternative would induce no new construction, it would cause no geology or seismicity impacts.

Hazardous Materials

The Port of Oakland is required to remediate identified hazardous wastes in accordance with the terms of the sale of the project site to the City. Therefore, the mitigation measures associated with Impact 4.6-1 would be implemented, even though no development would occur on the site.

Air Quality

No construction or increase in vehicle trips would occur under this alternative, and there would be no impact on air quality.

Hydrology and Water Quality

No increase in impervious surfaces would occur under this alternative, and thus there would not be any impact on hydrology or water quality.

Noise

No construction or increase in traffic would occur under this alternative, and thus there would be no impact on the noise environment.

Biological Resources

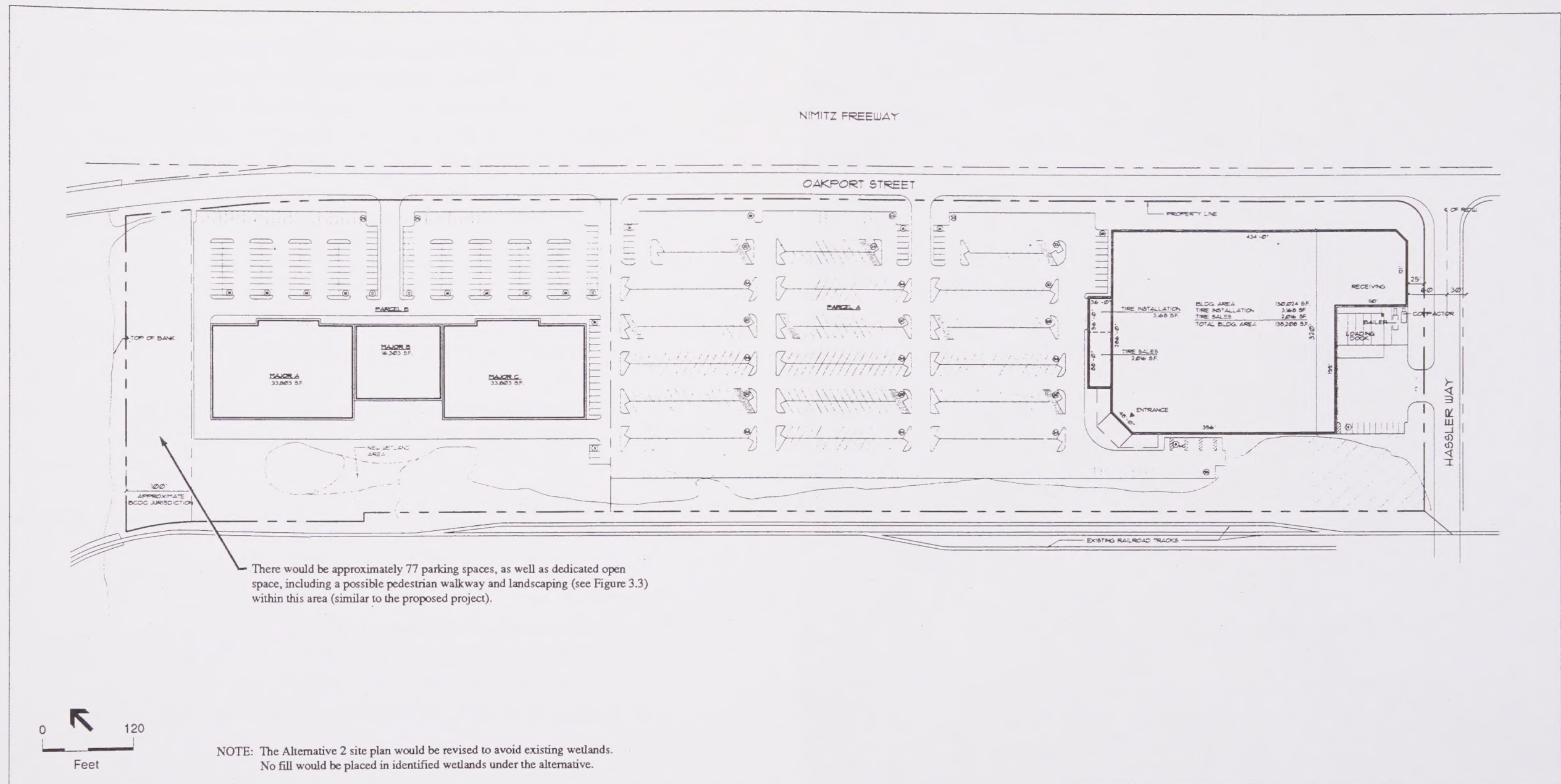
None of the biological resource impacts described for the proposed project would occur under this alternative.

Public Services and Utilities

No public services-related or utilities-related impacts would occur under this alternative.

5.2 ALTERNATIVE 2: 219,000 GROSS SQUARE FEET OF RETAIL

Alternative 2 assumes that the approximately 2.2 acres along the southwestern boundary of the site that comprises a man-made stormwater treatment facility would be determined by the U.S. Army Corps of Engineers ("COE") to be wetlands which are not exempt from its jurisdiction. Under this alternative, the 2.2 acre area would be partitioned from the remainder of the site (e.g., by a fence or other protective barrier) and left undeveloped. The remainder of the project site would be developed to contain approximately 219,000, gross square feet (gsf) of value-oriented retail uses, 1,021 parking spaces, landscaping, lighting, loading areas, and dedicated open space within the 100-foot BCDC shoreline jurisdictional zone that would include a public walkway and landscaping (see Figure 5.1). Like the proposed project, this alternative would include a warehouse anchor tenant, Price-Costco, that would occupy approximately 135,000 gsf in the southerly 13.5 acres of the site.¹ The remaining value-oriented retail uses (assumed to be category stores in this alternative) in the northerly 9.1 acre portion of the site would be reduced by 30,000 gsf from the proposed project, to approximately 84,000 gsf.² This floor area would comprise two stores of approximately 34,000 gsf each and one store of 16,000 gsf. The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans. However, maximum building heights would remain 37 feet.



SOURCE: Mulvanny Partnership

Figure 5.1
Alternative 2 Site Plan

Alternative 2 would be considered an environmentally superior alternative because it would reduce the magnitude of significant traffic, parking, water quality, and seismic impacts of the proposed project, although not to less than significant levels. A significant unavoidable impact of the proposed project, constrained weaving operations on I-880 during the weekend noon peak period with Coliseum events in progress, could be avoided under Alternative 2; additional analysis is needed to resolve the question. Air quality and operational noise effects of the proposed project, although not significant, would also decrease under Alternative 2.

Land Use and Policy Analysis

Like the proposed project, this alternative would require a Major Conditional Use Permit. The alternative would be consistent with goals and policies in the Oakland *Comprehensive Plan*.

A shoreline alteration permit from BCDC would be required to develop parking spaces and dedicated open space, including a pedestrian walkway, within the 100-foot shoreline jurisdictional zone.

Population, Employment and Housing

This alternative assumes a 135,000 gsf warehouse store and 85,000 gsf occupied by value-oriented stores. As with the proposed project, it is assumed that the Davis Street Costco in San Leandro would be closed as an indirect impact of the alternative and that 75 percent of its job slots (107 jobs) would be transferred to the Coliseum Shoreline site. As shown in Table 5.1, estimated construction cost for the alternative is \$11.1 million, \$2.4 million less than the proposed project. Projected construction employment would be 53 person-years, compared to 64 for the proposed project.

Primary employment generated by the alternative would be 205 net new jobs, 19 fewer than the proposed project. This assumes 69 net new jobs at the Price-Costco store in the project alternative, plus 136 from other project tenants. Secondary employment for the alternative would be 246 indirect and induced jobs. Total permanent employment attributable to the alternative would be 558 jobs, 56 less than the 502 total jobs generated by the proposed project. Table 5.2 shows projected total employment for the alternative, by type of retail tenant.

The 312 permanent jobs generated by this alternative would increase the projected 1995 jobs-to-housing balance ratio in Oakland from 1.08 to 1.09 (as would the proposed project).

Visual Quality

Impacts of this alternative on existing visual character and on views of and from the project site would be similar to the effects of the proposed project. Building locations, footprints, facades and heights would be substantially the same as with the proposed project. Light and glare from vehicles would decrease somewhat, proportional to the decreased number of trips to the project site. Mitigation for impacts under this alternative would be the same as for the proposed project.

Traffic, Transportation, Circulation and Parking

Traffic Conditions

TABLE 5.1: ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE 2

	<u>Number of Square Feet</u>	<u>Cost Per Square Foot</u>	<u>Estimated Total Cost (\$ Million)</u>
Price-Costco			
Warehouse Store	135,000	\$42	\$5.7
Category Stores	85,000	\$64	\$5.4
General Retail Stores	0	\$91	\$0.0
TOTAL	220,000	\$505	\$11.1

SOURCE: Pryde Roberts Carr

TABLE 5.2: PROJECTED EMPLOYMENT FOR ALTERNATIVE 2

	<u>Number of Square Feet</u>	<u>Employees Per Square Foot</u>	<u>Total No. Employees</u>
Price-Costco Warehouse	135,000	0.0013	176
Store /a/ Category Stores			
/b/	85,000	0.0016	136
General Retail Stores /c/	0	0.0023	0
TOTAL	220,000	---	312

/a/ Average 770 square feet per employee

/b/ Average 600 square feet per employee

/c/ Average 450 square feet per employee

SOURCE: Pryde Roberts Carr

Gross square footage under this alternative would decrease 12 percent as compared with the proposed project. The EIR assumes that Alternative 2 would generate 12 percent fewer trips. Trip generation for this alternative is shown in Table 5.3.

With this alternative, impacts on the roadway system would be 75 total weekday PM peak-hour trips less than with the proposed project, and 166 total weekend noon peak-hour trips less. Combined with existing traffic, the volumes on Oakport Street at the bridge over Damon Slough would be a maximum of 934 northbound and 849 southbound trips, or 34 fewer weekday PM peak hour trips and 74 fewer weekend noon peak hour trips than with the proposed project.

The impact of Alternative 2 at the study intersections would likely be as described below. At Oakport Street/Hassler Way the alternative would represent no significant improvement over the proposed project because traffic volumes would only decrease by four vehicles on each of the southbound and westbound approaches. At Oakport Street/66th Avenue, traffic volumes generated by Alternative 2 would degrade intersection operations to unacceptable levels of service and would require signalization. With signalization, however, intersection operation

under Alternative 2 would improve to an acceptable service level (LOS D). (Mitigation for two westbound left-turn lanes with a shared right of way could be required to relieve westbound queuing.) The intersections of I-880 southbound off-ramp/66th Avenue and I-880 northbound off-ramp/66th Avenue already meet signal warrants under existing conditions. Alternative 2 would further degrade existing unacceptable levels of service. Under Coliseum Event conditions, Alternative 2 traffic would contribute to intersection failure, with a V/C ratio greater than 1.2.

TABLE 5.3: TRIP GENERATION FOR ALTERNATIVE 2

Land Use	Size (ksf)	Weekday						Weekend					
		Daily Rate	Average Daily Trips	PM Peak Hour				Daily Rate	Average Daily Trips	Noon Hour			
				Rate	Total	In	Out			Rate	Total	In	Out
Big-Box Retail and Value-oriented Retail	220.0	46	10,120	5.29	1,164	582	582	63	13,860	8.82	1,940	970	970
Less 22 % internal trip reduction			-2,226		-256	-128	-128		-3,049		-427	-213	-213
Total			7,894		908	454	454		10,810		1,513	757	757

Note: All rates shown are rates per 1,000 square feet

SOURCE: City of Oakland.

At the I-880 ramps under Alternative 2, all but one of the ramps would operate at LOS A or B under all study scenarios. The I-880 southbound off-ramp would operate at LOS A except under Coliseum Event conditions when it would operate at LOS F, as it would with project traffic.

Parking Conditions

Preliminary site plans indicate that this alternative would provide approximately 1,098 spaces. Peak parking demand would require 1,236 spaces, including the 15 spaces discount for employee transit use. This alternative would fail to meet peak parking demand by 138 spaces, and, like the proposed project, would require identification of additional measures to satisfy peak parking demand.

Transit Conditions

This alternative would result in slightly less of an increase in transit usage than would the proposed project. This alternative would have no significant effect on transit serving the area.

Geology and Seismicity

This alternative would partition off a portion of the site (2.2 acres). However, despite a reduction in surface area disturbed and undeveloped uses compared with the proposed project, Alternative 2 would expose customers and employees to seismic hazards (e.g., ground shaking) on-site and would create the potential for structural damage over the life the project resulting from settlement or collapse of weak geologic units and foundation soils. With mitigation proposed as part of the project, the potential for structural damage as well as seismic hazards would be reduced to less than significant levels. Construction activities would also increase the potential for water and wind erosion of graded soil and imported fill. With implementation of standard control practices outlined in the mitigation proposed as part of project, construction erosion impacts would not be significant.

Hazardous Materials

The impacts of this alternative would be similar to those of the proposed project. The mitigation measures for the proposed project would also apply to this alternative.

Air Quality

Under this alternative, criteria pollutant emissions would be approximately 12 percent less than those of the proposed project, proportional to the decrease in vehicle trips. Nitrogen oxide, particulate, and hydrocarbon emissions would be well below BAAQMD significance standards. Carbon monoxide ("CO") emissions would also be about 12 percent less than those of the proposed project under Alternative 2, and although requiring micro-scale analysis, would not exceed applicable state standards.

Hydrology and Water Quality

Under Alternative 2, impacts associated with storm runoff and water quality due to creation of impervious surfaces would be less than those of the project in proportion to the decrease in

developed acreage under Alternative 2. This alternative would develop 2.2 acres less than the proposed project to avoid filling on-site wetlands. Mitigation for impacts under this alternative would be the same as for the proposed project.

Noise

Significant temporary construction noise impact on recreational uses in Martin Luther King, Jr. Regional Shoreline would occur under this alternative, as under the proposed project. The Costco Building would be located less than 100 feet from the centerline of Oakport Street and at this distance, noise levels would be conditionally acceptable for commercial uses. A noise reduction plan would be required to ensure that acceptable interior noise levels at this building would be maintained.

All other operational noise impacts of Alternative 2 would be less than significant.

Biological Resources

This alternative assumes that the COE would assert jurisdiction over 2.2 acres of on-site man-induced palustrine emergent wetlands. Accordingly, this area would not be included in the development program, and would be partitioned from the remainder of the site (e.g., by a fence or other protective barrier). Impacts to common wildlife and common vegetation due to implementation of this alternative would be less than significant. These impacts would not be significant, therefore no mitigation would be required. Impacts to on-site man-induced seasonal wetland habitat would be substantially reduced under this alternative.

Public Utilities and Services

Impacts to public utilities and services due to implementation of Alternative 2 would be decreased in magnitude compared with the proposed project and would be less than significant.

5.3 ALTERNATIVE 3: 275,000 GROSS SQUARE FEET OF RETAIL

Alternative 3, like the proposed project, assumes that the 2.2 acres of man-induced palustrine emergent wetlands would be exempt from the jurisdiction of the COE and would be developed. This alternative is included in the EIR analysis because increased development on the site would generate greater economic benefits to the City than the proposed project, and thereby, project

objectives would be more completely fulfilled; and, because Price-Costco designs its stores in a range of square footages, with a maximum square footage design of 156,000 gross square feet.

The project area would contain approximately 275,000 gsf of value-oriented retail uses, 1,210 parking spaces, landscaping, lighting, loading areas, and dedicated open space the 100-foot BCDC shoreline jurisdictional zone that would include a public walkway and landscaping (see Figure 5.2). The alternative would include a warehouse anchor tenant, Price-Costco, in the southeast corner of the project site that would occupy approximately 156,000 gsf, or 21,000 gsf more than with the proposed project. In the northwest portion of the site, three smaller value-oriented retail uses would occupy stores of approximately 23,000 gsf (general retail store), 65,000 gsf and 31,000 gsf (both category stores) each, for a total of 119,000 gsf, 4,000 gsf more than the proposed project.³

The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans. As with the proposed project, maximum building heights would be 37 feet.

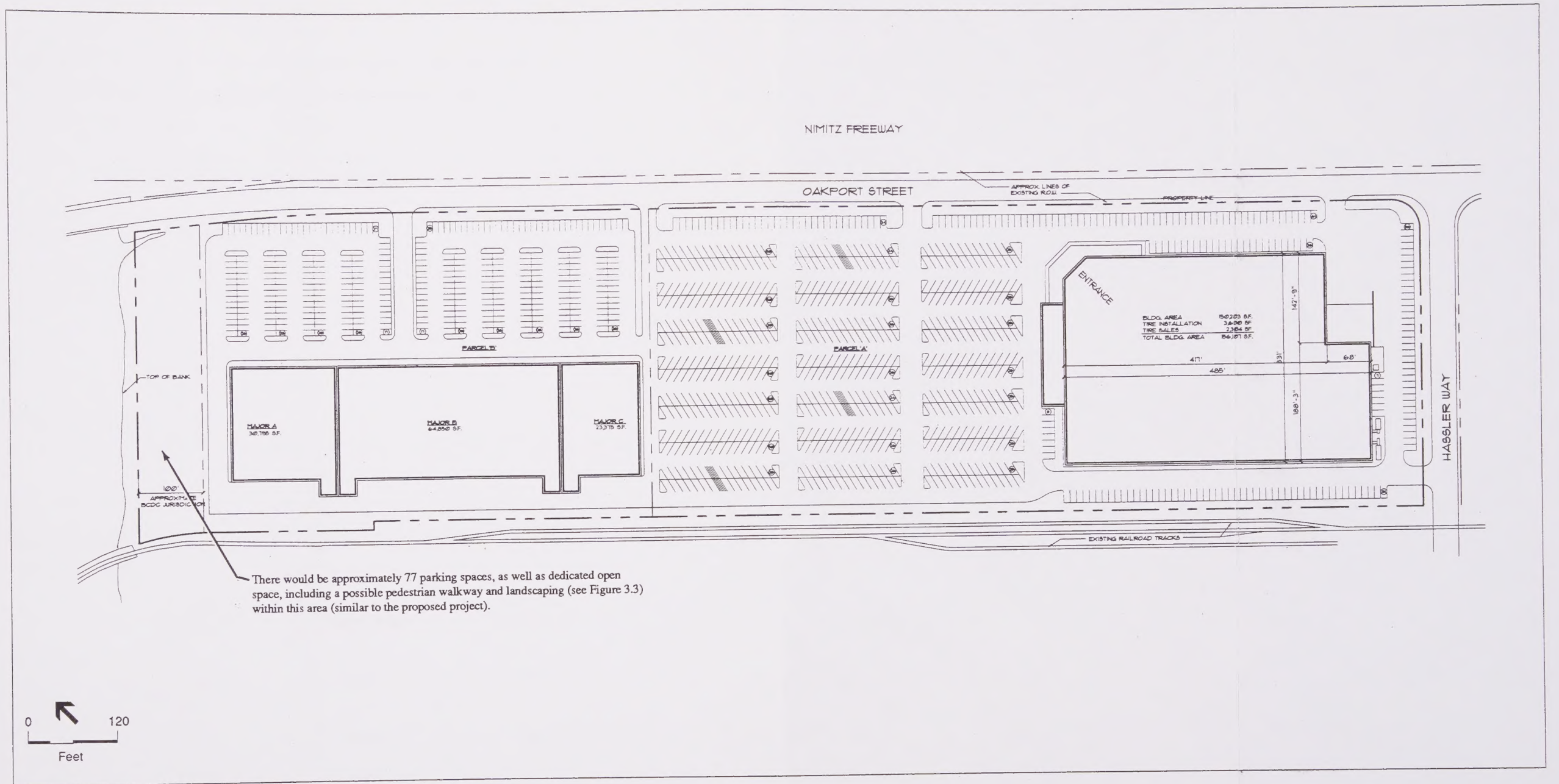
Land Use and Policy Analysis

Like the proposed project, this alternative would require a Major Conditional Use Permit. The alternative would be consistent with goals and policies in the Oakland *Comprehensive Plan*.

A shoreline alteration permit from BCDC would be required to develop parking spaces and dedicated open space including landscaping and a pedestrian walkway within its 100-foot shoreline jurisdictional zone.

Population, Employment and Housing

Alternative 3 would include a 156,000 gsf warehouse store, 96,000 gsf of value-oriented category uses, and 23,000 gsf of general retail uses. It is assumed that the Davis Street Costco in San Leandro would be closed as an indirect impact of the alternative, and 75 percent of its job slots (107 jobs) would be transferred to the Coliseum Shoreline site. As shown in Table 5.4, estimated construction cost for the alternative is \$14.8 million, \$1.3 million more than the estimated cost of the project. Construction employment for Alternative 3 would be 71 person years, compared to 65 for the proposed project.



SOURCE: Mulvanny Partnership

TABLE 5.4: ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE 3

	<u>Number of Square Feet</u>	<u>Cost Per Square Foot</u>	<u>Estimated Total Cost (\$ Million)</u>
Price-Costco Warehouse	156,000	\$42	\$6.6
Store			
Category Stores	96,000	\$64	\$6.1
General Retail Stores	23,000	\$91	\$2.1
TOTAL	275,000	\$197	\$14.8

SOURCE: Pryde Roberts Carr

TABLE 5.5: PROJECTED EMPLOYMENT FOR ALTERNATIVE 3

	<u>Number of Square Feet</u>	<u>Employees Per Square Foot</u>	<u>Total No. Employees</u>
Price-Costco Warehouse	156,000	0.0013	203
Store /a/			
Category Stores /b/	96,000	0.0016	154
General Retail Stores /c/	23,000	0.0023	53
TOTAL	275,000	---	410

/a/ Average 770 square feet per employee

/b/ Average 600 square feet per employee

/c/ Average 450 square feet per employee

SOURCE: Pryde Roberts Carr

Primary employment generated by this alternative would be 303 net new jobs, 79 more than with the proposed project. This projection includes 96 net new jobs at the Price-Costco store, plus 207 from other stores. Secondary employment is projected to be 364 indirect and induced jobs in this alternative. Total primary and secondary employment attributable to the alternative therefore would be 667 jobs, or 165 more than the 502 permanent jobs generated by the proposed project.

Total primary and secondary employment of 667 net new jobs would increase the projected jobs-to-housing balance ratio in 1995 from 1.08 to 1.09 (as would the proposed project). This would be a less than significant change.

Visual Quality

Impacts of this alternative on visual character and on views of the project site would be similar to the effects of the proposed project. Building locations, footprints, facades and heights would substantially the same as with the proposed project. Light and glare from vehicles would be somewhat greater than with the project. Mitigation for impacts under this alternative would be the same as for the proposed project.

Traffic, Transportation, Circulation and Parking

Traffic Conditions

This alternative would be about 10 percent larger in gross floor area than the proposed project, and would generate approximately 10 percent more trips. The trip generation for a project of this size is shown in Table 5.6.

With this alternative, traffic volumes on Oakport Street at the bridge over the Damon Slough would be a maximum of 995 northbound trips during the weekday p.m. peak, and 944 southbound trips during the weekend noon peak.

The impact of Alternative 3 at the study intersections would likely be as described below. The intersection of Oakport Street/Hassler Way could meet signal warrants, a significant impact. Queuing on Oakport Street at 66th Avenue, on the northbound approach, would lengthen and would probably require northbound approach lanes of sufficient length to accommodate all

TABLE 5.6: TRIP GENERATION FOR ALTERNATIVE 3

Land Use	Size (ksf)	Weekday						Weekend					
		Daily Rate	Average Daily Rate	PM Peak Hour				Daily Rate	Average Daily Rate	Noon Hour			
				Rate	Total	In	Out			Rate	Total	In	Out
Big-Box Retail and Value-oriented Retail	275.0	46	12,650	5.29	1,454	727	727	63	17,325	8.82	2,426	1,213	1,213
Less 22 % internal trip reduction			-2,783		-320	-160	-160		-3,812		-534	-534	-534
Total			9,867		1,134	567	567		13,514		1,892	1,892	1,892

Note: All rates shown are rates per 1,000 square feet

SOURCE: City of Oakland.

queuing evenly across both lanes. This means that the northbound approach should be striped either as separate right and through lanes, or as dual right-turns with one a shared through lane.

This additional approach lane could be required to mitigate the level of service for the northbound approach intersection operations. These mitigation measures could be adequate for intersection operations with existing and cumulative traffic volumes.

The intersections of I-880 southbound off-ramp/66th and I-880 northbound off-ramp/66th Avenue already meet signal warrants under Existing Conditions. Under Coliseum Event conditions, operations are already at LOS F; Alternative 3 would add to the already severe congestion in the intersection.

The impact of Alternative 3 under Existing Conditions at the I-880 ramps would be less than significant. All but one of the ramps would operate at satisfactory levels under all study scenarios with this alternative. However, during Coliseum Events conditions, traffic under Alternative 3 would further degrade already unacceptable service levels (LOS F), and would be a significant impact.

Weaving constraints on northbound I-880 would be significant under this alternative.

Parking Conditions

Preliminary site plans indicate that this alternative would provide approximately 1,210 spaces (see Figure 5.2). Peak parking demand would require 1,518 spaces, including the 15 space discount for employee transit use. This alternative would fail to meet peak parking demand by 308 spaces, and, like the proposed project, would require identification of additional measures to meet peak parking demand.

Transit Conditions

This alternative could increase employee use of transit to access the site by two to three employees. No measurable increase in shoppers using transit is expected. This alternative would have no significant effect on transit serving the area.

Geology and Seismicity

This alternative would contain approximately ten percent more square footage of retail space than the proposed project, and would thus increase exposure of customers and employees to seismic ground-shaking on-site. Development of the proposed project could also slightly increase the potential for structural damage over the life the project resulting from settlement or collapse of weak geologic units and foundation soils. With mitigations proposed as part of the project, seismic impacts under Alternative 3 would be reduced to a less than significant level. Construction activities would also increase the potential for water and wind erosion of graded soil and imported fill. With implementation of standard control practices specific in the mitigation proposed as part of project, construction erosion impacts would be less than significant.

Hazardous Materials

Similar to the proposed project, implementation of this alternative would require site remediation due to the presence of hazardous materials in site soils. Other mitigations proposed for the project would also apply to this alternative.

Air Quality

Under this alternative, impacts from hydrocarbon emissions would be approximately 164 pounds per day, thus exceeding the BAAQMD significance threshold. The exceedance would be a significant unavoidable impact of the alternative. Impacts related to carbon monoxide would also increase and could exceed State standards, which would be a significant impact. Other criteria pollutant emissions would be below BAAQMD thresholds.

Hydrology and Water Quality

Under this alternative, storm water runoff would increase compared with the proposed project due to the creation of additional impervious surface area. This would be a less than significant impact. Increased runoff would also cause pollutant loads to increase. With mitigation proposed as part of the project, pollutant loads could be reduced to less than significant levels.

Noise

Significant construction noise impact on recreational uses in Martin Luther King, Jr. Regional Shoreline would occur under this alternative, as under the proposed project. The Costco Building would be located less than 100 feet from the centerline of Oakport Street and at this distance, noise levels would be conditionally acceptable for commercial uses. A noise reduction plan would be required to ensure that acceptable interior noise levels at this building would be maintained.

All other operational noise impacts of Alternative 3 would be less than significant.

Biological Resources

Development of the proposed project would require the filling of 2.2 acres of on-site man-induced palustrine emergent wetlands. In addition, Alternative 3 would result in the disturbance to, or direct mortality of, common wildlife and vegetation. These impacts would not be significant, therefore no mitigation would be required.

Public Utilities and Services

Impacts to public utilities and services due to implementation of Alternative 3 increase compared with the proposed project but would remain less than significant.

5.4 ALTERNATIVE 4: 350,000 GROSS SQUARE FEET OF RETAIL

Alternative 4, like the proposed project and Alternative 3, assumes the 2.2-acre man-made stormwater treatment facility would be exempt from COE jurisdiction and that the entire site would be developed. This alternative is included in the EIR analysis because it represents the maximum feasible level of development that can be accommodated on the site, short of making major physical improvements to local street segments (such as widening the bridge on Oakport Street between 66th Avenue and the project frontage). Correspondingly, this alternative would be expected to generate the maximum amount of economic benefit to the City given that the only physical roadway improvements would consist of intersection signalization and widening, striping, and signing intersection approaches.

This alternative would contain approximately 350,000 gsf of value-oriented retail uses, a minimum of 1,750 parking spaces, landscaping, lighting, loading areas, and dedicated open within the 100-foot BCDC shoreline jurisdictional zone that would include a public walkway and landscaping. The alternative would include a warehouse tenant, Price-Costco, that would occupy approximately 156,000 gsf, 139,000 gsf of category store space and 55,000 gsf of general retail uses. Development of 350,000 gsf of commercial uses under this alternative could require multi-story buildings with heights up to 50 feet, and could also require development of structured parking or, alternatively, roof-top parking. The need for increased building heights and/or structured parking cannot be determined until preliminary site plans and building designs have been developed. The shapes and locations of building footprints under this alternative would be different from those of the proposed project, as would be the parking and circulation plans.

Land Use and Policy Analysis

Like the proposed project, this alternative would require a Major Conditional Use Permit. The alternative would be consistent with goals and policies in the Oakland *Comprehensive Plan*.

A shoreline alteration permit from BCDC would be needed to accommodate dedicated open space, including a pedestrian walkway, and parking within its 100-foot shoreline jurisdictional area.

Population, Employment and Housing

Alternative 4 includes a 156,000 gsf warehouse store, 139,000 gsf of value-oriented retail, and 55,000 gsf of general retail uses. It is assumed that the Davis Street Costco in San Leandro would be closed as an indirect impact of implementing the alternative and 75% of its jobs slots (107 jobs) would be transferred to the Coliseum Shoreline site. As shown in Table 5.7, estimated construction costs for the alternative would be \$25.8 million, an increase of more than \$12 million over the \$13.5 estimated cost of the project. Construction employment for Alternative 4 would be 123 person years, 58 more than the proposed project.

Primary employment generated by this alternative would be 445 net new jobs, 221 more than the proposed project. This alternative includes 96 net new jobs at Price-Costco, plus 349 new jobs at other stores. Secondary employment would be 534 indirect and induced jobs in this alternative. Total primary and secondary employment attributable to the alternative would therefore be 979 jobs, 477 more than the 502 permanent jobs generated by the proposed project. Table 5.8 shows total employment for this alternative.

TABLE 5.7: ESTIMATED CONSTRUCTION COSTS FOR ALTERNATIVE 4

	<u>Number of Square Feet</u>	<u>Cost Per Square Foot</u>	<u>Estimated Total Cost (\$ Million)</u>
Price-Costco Warehouse Store	156,000	\$42	\$6.6
Category Stores General Retail Stores	139,000	\$64	\$8.9
Parking Structure	55,000	\$91	\$5.0
	1,750 spaces	\$30,000/spaces	\$5.3
TOTAL	350,000	\$197	\$25.8

SOURCE: Pryde Roberts Carr

TABLE 5.8: PROJECTED EMPLOYMENT FOR ALTERNATIVE 4

	<u>Number of Square Feet</u>	<u>Employees Per Square Foot</u>	<u>Total No. Employees</u>
Warehouse			
Stores /a/	156,000	0.0013	203
Category Stores			
/b/	139,000	0.0016	222
General Retail			
Stores /c/	55,000	0.0023	127
TOTAL	350,000	---	552

/a/ Average 770 square feet per employee

/b/ Average 600 square feet per employee

/c/ Average 450 square feet per employee

SOURCE: Pryde Roberts Carr

Total primary and secondary employment of 979 jobs would increase the projected jobs-to-housing balance ratio in 1995 from 1.08 to 1.09 (as would the proposed project). This would be a less than significant change.

Visual Quality

Impacts to visual character and views of the project site would be greater than those from the proposed project due to increased building heights and structured parking. This alternative would increase view obstruction of natural landscape features (e.g., East Bay hills, San Leandro Bay) and man-made landmarks (e.g., Oakland Coliseum) sites across the project site from short-range and medium-range publicly accessible viewpoints. This could be a significant impact; however, this alternative would be required to follow the City's design review procedures, similar to the proposed project and the other project alternatives.

In addition, light and glare from vehicles would increase substantially as compared with the proposed project. This would be a less than significant change. Mitigation measures for visual, light and glare impacts would be the same as for the proposed project.

Traffic, Transportation, Circulation and Parking

Traffic Conditions

This alternative would be about 40 percent larger in gross floor area than the proposed project, and would generate approximately 40 percent more trips. The trip generation for a project of this size is shown below:

TABLE 5.9: TRIP GENERATION FOR ALTERNATIVE 4

Land Use	Size (ksf)	Weekday						Weekend					
		Daily Rate	Average Daily Rate	PM Peak Hour				Daily Rate	Average Daily Rate	Noon Hour			
				Rate	Total	In	Out			Rate	Total	In	Out
Big-Box Retail and Value-oriented Retail	350.0	46	11,509	5.29	1,324	662	662	63	16,100	8.82	3,087	1,544	1,544
Less 22 % internal trip reduction			-2,531		-291	-146	-146		-3,542		-697	-340	-340
Total			8,977		1,033	517	517		12,558		2,408	1,204	1,204

Note: All rates shown are rates per 1,000 square feet

SOURCE: City of Oakland.

With this alternative, traffic volumes on Oakport Street at the bridge over the Damon Slough would be a maximum of 1,125 northbound trips and 1,127 southbound trips during the weekend noon peak. Arterial roadway conditions in the southbound direction would be at satisfactory levels. However, the level of service for the northbound direction would become unacceptable (LOS E) unless the intersection of Oakport Street at 66th Avenue were redesigned for two northbound approach lanes. This mitigation would also reduce queuing. With dual lanes, the northbound direction would become acceptable (LOS D).

The impact of Alternative 4 at the study intersections would likely be as described below. The intersection of Oakport Street/Hassler Way would meet signal warrants. This would be a significant impact. Queuing on Oakport Street/66th Avenue would become unacceptable on the

northbound approach. Northbound Oakport Street would require widening to two approach lanes further back towards the bridge. Also, to even out the queues in each lane, the approach would have to be designed as a dual right-turn with a shared through lane. Intersection operations then would likely be acceptable with existing and cumulative Coliseum Event traffic volumes.

The intersections of I-880 southbound off-ramp/66th and I-880 northbound off-ramp/66th Avenue already meet signal warrants under Existing Conditions. Under Coliseum Event conditions, operations are already at LOS F. Alternative 4 would only add to the already severe congestion in the intersection.

The impact of Alternative 4 under Existing Conditions at the I-880 ramps would be less than significant. All but one of the ramps would operate at satisfactory levels under all study scenarios with this alternative. However, during Coliseum Events conditions, traffic under Alternative 4 would further degrade unacceptable service (LOS F) and would be a significant impact.

Weaving constraints on northbound I-880 would be significant under this alternative.

Parking Conditions

Peak parking demand under Alternative 3 would require 1,831 parking spaces. It is unlikely that peak parking demand could be met in on-site surface parking facilities, given the area of the site that would be occupied by structures, landscaping, and dedicated open space under this alternative.

Transit Conditions

This alternative would be expected to increase employee access to the site by transit by approximately 15 employees over the proposed project during off-peak periods. Existing transit service capacity would be able to accommodate this increase.

Access and On-Site Circulation

Potential heavy on-site queues for exiting vehicles could be a major circulation problem.

Geology and Seismicity

This alternative would contain 40 percent more square footage of retail space than the proposed project and would thus increase exposure of customers and employees to seismic ground-shaking on-site. It also increase the potential for structural damage over the life the alternative resulting from settlement or collapse of weak geologic units and foundation soils. With mitigations proposed as part of the project, seismic impacts under Alternative 4 would be reduced to a less than significant level. Construction activities would also increase the potential for water and wind erosion of graded soil and imported fill. With implementation of standard control practices outlined in the mitigation proposed as part of project, this would not be significant.

Hazardous Materials

Similar to the proposed project, implementation of this alternative would require site remediation due to the presence of hazardous materials in site soils. Other mitigation measures for the proposed project would also apply to this alternative.

Air Quality

Under this alternative, hydrocarbon emissions would be approximately 209 pounds per day, exceeding the BAAQMD significance threshold . PM₁₀ emissions would total about 182 pounds per day, also exceeding the BAAQMD significance threshold. Hydrocarbon and PM₁₀ emissions would thus be significant unavoidable impacts of the alternative. Impacts related to carbon monoxide would also increase, and could exceed State one-hour standards and eight hour standards for some intersections, which would also be a significant impact of the alternative.

Hydrology and Water Quality

Under this alternative, storm water runoff would increase compared with the proposed project due to development of additional impervious surface area. This would be a less than significant impact. Increased runoff would also cause pollutant loads to increase. With mitigation proposed as part of the project, pollutant loads could be reduced to less than significant levels.

Noise

Ambient noise levels from potential construction and operations would increase over existing conditions; operational noise effects, both on-site and off-site, could reach significant levels. However, without developed site plans, further analysis is not possible.

Biological Resources

Development of the proposed project would require the filling of 2.2 acres of on-site man-induced palustrine emergent wetlands. Alternative 4 would result in the disturbance to, or direct mortality of, common wildlife and common vegetation. These impacts would not be significant, therefore no mitigation would be required.

Public Services and Utilities

Impacts to public utilities and services due to implementation of Alternative 4 would increase compared to the proposed project but would remain less than significant.

5.5 ALTERNATIVE 5: OFF-SITE PROJECT DEVELOPMENT

Alternative 5 considers development of the 250,000 gsf project at another location in the City, the 21 acre Ratto/Hamerskjold School site, located west of Empire Road between Hegenberger Road and 98th Avenue. This site was identified by the City as suitable development site in the Coliseum Area. The Hamerskjold site is currently a vacant school site with adjoining undeveloped land that is currently in agricultural use. The alternative would include the same mix of uses and square footages as the proposed project, but the shapes and locations of building footprints would be different from the proposed project, as would be the parking and circulation plans.

Development of this site for the Coliseum Shoreline Project would fulfill all of the project sponsors' objectives except one: to develop the center in a highly visible freeway location with direct access. The Hamerskjold site is not visible from I-880, nor is it not readily visible from either Hegenberger Road or 98th Avenue.

Alternative 5 would be considered an environmentally superior alternative because it would avoid all of the identified significant impacts of the proposed project on traffic operations that

cannot be reduced to less than significant levels. Development of this alternative would avoid significant project effects on weaving operations on I-880. However, even without the project, the 66th Avenue/I-880 southbound off-ramp intersection, and I-880 southbound off-ramp itself would operate at unacceptable levels of service during the weekend noon peak period with Coliseum events in progress.

The magnitude of significant traffic and parking impacts, although different than under the proposed project, would decrease under Alternative 5. Visual quality, access, noise, and public services and utilities impacts, although different than under the proposed project, would increase under Alternative 5; however, it is expected that there would be feasible mitigation measures that would reduce these impacts to less than significant levels.

Land Use and Policy Analysis

Like the proposed project, this alternative would require a Major Conditional Use Permit. This alternative would be consistent with goals and policies of the Oakland *Comprehensive Plan*. Because the project would no longer be adjacent to Damon Slough, a BCDC shoreline alteration permit would not be needed.

Population, Employment and Housing

This alternative would be expected to generate the same number of jobs, and have the same construction cost, as would the proposed project (see Section 4.2).

Visual Quality

Impacts on visual character and views would be different, but not necessarily less, than the proposed project. Although the Hamerskjold site would not be as visible from the freeway and from vantage points around San Leandro Bay, the site is adjacent to the Columbia Gardens neighborhood located between I-880 and Empire Road. The project would substantially change the visual character of this neighborhood and vicinity, particularly from short-range and medium-range publicly accessible viewpoints. This would be a significant impact that would require mitigation. In addition, the light and glare from vehicles could significantly affect residential uses in the vicinity of the site.

Traffic, Transportation, Circulation and Parking

Traffic Conditions

This alternative would generate approximately the same number of trips as the proposed project. With this alternative, however, project-related traffic would be added to the 98th Avenue freeway interchange rather than the 66th Avenue interchange. In contrast to the 66th Avenue interchange, the 98th Avenue interchange is not affected by Coliseum event traffic. Therefore, the significant unavoidable impacts resulting from project traffic with Coliseum events in progress (see Section 4.4) would not occur under this alternative. The existing intersections of 98th Avenue and the I-880 freeway ramps are operating at poor levels of service.⁴ Currently, the 98th Avenue interchange is being upgraded by Caltrans. Based on available data, it is anticipated that the upgraded intersections would operate at acceptable levels of service with project traffic.

Once upgraded, the intersection of 98th Avenue and the I-880 southbound off-ramp would operate at LOS B for the alternative plus existing conditions and would remain at LOS B for the alternative plus year 2015 conditions. The intersection of 98th Avenue and the I-880 northbound off-ramp would operate at LOS B for the alternative plus existing conditions and would operate at LOS D for the alternative plus year 2015 conditions.⁵

A small amount of project traffic would be expected to access the site via the Hegenberger Road freeway interchange. This interchange is awaiting upgrade by Caltrans, as is the intersection that would be most affected by the project, the Hegenberger/Edgewater Drive intersection. Based on available data, it is anticipated that the Hegenberger/Edgewater intersection would operate at acceptable levels of service (i.e., LOS D or better) with project traffic.⁶

There could, however, be a new significant impact with this alternative. There may be traffic intrusion into adjacent residential neighborhoods both east of Empire Road, and south of 98th Avenue. To the degree that traffic on the local streets would increase, the livability of the neighborhoods would be adversely affected.

Parking Conditions

The parking demand for this alternative would be expected to be the same as for the proposed project. Of concern would be the effects of the project on the availability of and use of on-street parking in adjacent residential neighborhoods.

Transit Conditions

This alternative would be expected to generate the same level of transit use by employees as the proposed project. Existing transit service capacity would be able to accommodate this increase.

Access and On-Site Circulation

Depending on the circulation plan for this alternative, there may be significant impacts on 98th Avenue, Hegenberger Road, and/or Empire Road resulting from vehicles accessing the Hamerskjold site. Improvements to 98th Avenue and Hegenberger Road at project driveways and a restriction on vehicular access to and from Empire Road would be expected to reduce these impacts to less than significant levels.

Geology and Seismicity

This alternative would be expected to have the same potential for structural damage over the life of the project resulting from settlement or collapse of weak geologic units and foundation soils, and would also expose customers and employees of the project to seismic hazards. With mitigations proposed in the project, the impact would be reduced to a less than significant level. Construction activities would also increase the potential for water and wind erosion of graded soil and imported fill. With implementation of standard control practices, these effects would not be significant.

Hazardous Materials

Implementation of this alternative could require site remediation due to the location of known hazardous materials sites along 98th Avenue and Hegenberger Road in proximity to the Hamerskjold site. Also, demolition of existing structures on the alternative site would likely involve the removal of asbestos and other friable materials.

Air Quality

Under this alternative, air pollutant emissions would be expected to be similar to those of the proposed project. Although local intersections would be expected to operate at acceptable levels of service, slower speeds would be anticipated near the project due to the adjacent residential uses. Also, due to the volumes of traffic on 98th Avenue and Hegenberger Road, there may be substantial queuing of vehicles depending on the circulation plan developed for this site.

Hydrology and Water Quality

Under this alternative, storm water runoff would be similar to the proposed project. With the mitigations proposed as part of the project, effects would be reduced to less than significant levels.

Noise

Ambient noise levels from construction and operations would increase over existing conditions. Noise levels would adversely affect the adjacent residential neighborhoods. Although these impacts could be significant, known mitigation measures would reduce the impacts to less than significant levels.

Biological Resources

Development of the Hamerskjold site would occur directly east of San Leandro Creek. Therefore, this alternative could result in disturbance of riparian creek vegetation and wildlife. Impacts to biological resources could be significant, thus requiring appropriate mitigation.

Public Services and Utilities

Impacts to public utilities and services due to implementation of this alternative would be greater than the proposed project, due to the proximity of the Hamerskjold site to residential uses.

5.6 ALTERNATIVES CONSIDERED BUT REJECTED

In addition to the alternatives discussed above, a number of other alternatives were considered but rejected because the alternatives would result in substantially similar significant impacts to

those of the proposed project or in additional significant impacts, or because implementation of the alternatives would not achieve the project sponsors' objectives, or both.

Along with a 400,000 gsf alternative on the project site, a number of alternative sites were considered. City staff conducted an extensive study of potential alternative sites for the proposed project, including: review of documentation prepared for the proposed Coliseum Area Redevelopment Plan, census data, available data for other planning programs, aerial photographs, maps, and field reconnaissance of candidate sites. The candidate sites were then evaluated. The sites, except for the Ratto/Hammerskjold School site discussed above as Alternative 5, are listed below.

400,000 Gross Square Feet of Retail

This alternative would be similar to the proposed project, but would contain approximately 400,000 gsf of value oriented retail uses. This alternative was originally considered by the City at the time it issued its Request for Proposals to development teams. However, this alternative would substantially increase traffic on Oakport Street and would require widening of the bridge that crosses over Damon Slough. As compared with the proposed project, construction costs of this alternative would increase, as would the number and magnitude of significant impacts (e.g., traffic, parking, noise, air quality, seismic hazards, and potentially visual quality).

EBMUD Surplus Site

This alternative would be located along Oakport Street north of 66th Avenue. At this location, the East Bay Municipal Utility District owns approximately 35 acres of undeveloped land, of which 20 acres could be developed for the Coliseum Shoreline Project. The impacts associated with this alternative would be substantially similar to those of the proposed project, due to the alternative's location adjacent to the 66th Avenue/I-880 Interchange. Like the proposed project, this alternative would result in significant unavoidable traffic impacts during the weekend noon peak period with Coliseum and Arena events in progress.

Fruitvale BART Station

This alternative would involve approximately 20 acres of land adjacent to the Fruitvale BART Station, between East 12th and East 14th Streets. This location is not directly accessible from any freeways, and hence would not meet the freeway visibility and access criteria of the project

sponsors. Access from I-880 could require substantial improvements to the Fruitvale Avenue Interchange at I-880 to accommodate project traffic. This alternative could also result in significant traffic and parking impacts on residential streets in the vicinity. Moreover, this site is currently the subject of a specific planning effort by the Spanish Speaking Unity Council and is therefore unavailable for development.

Coliseum BART Station

This alternative would involve approximately 34 acres of land adjacent to the Coliseum BART Station, east of San Leandro Avenue. Although this location is not directly accessible from any freeways, traffic from I-880 would use the 66th Avenue Interchange primarily. Accordingly, this alternative, like the proposed project, would likely result in significant unavoidable traffic impacts at the interchange during the weekend noon peak period with Coliseum events in progress. In addition, this alternative could result in additional significant traffic effects on local streets, and intersections and in noise impacts on existing uses in the vicinity.

Coliseum BART Industrial Area

This alternative would involve approximately 25 acres of land, also adjacent to the Coliseum BART Station but west of San Leandro Avenue. Although this location is not directly accessible from any freeways, access from I-880 would primarily use the 66th Avenue Interchange. Accordingly, this alternative would likely result in significant unavoidable impacts at the interchange during the weekend noon peak period with Coliseum events in progress. In addition, this alternative could result in additional significant traffic impacts on local streets and intersections, and in noise impacts on existing uses in the vicinity.

NOTES - Alternatives to the Project

- 1 Warehouse stores typically range from 105,000 to 170,000 square feet and carry a wide variety of merchandise with limited selection that is sold at wholesale and discount prices. Stock can include groceries, housewares, small electronics equipment, books, auto supplies, gifts, beverages, computers, and office supplies. Examples include Price Club/Costco, and Sam's Club.
- 2 Category stores, also called "category busters" carry a single type of product (e.g., toys, books, office supplies, electronics, value drugs, off-price clothing). They typically range from 20,000 to 60,000 square feet. Examples include Toys R Us, Crown Books, Circuit City, Payless Drugs, Burlington Coat Factory, and Ross.
- 3 General Retail is all other retail uses, including value-oriented discount department stores (e.g., K-Mart, Walmart, Target), supermarkets, and restaurants. There is no typical size because general retail can have a wide range in square footage.
- 4 I. Jeeva, Supervising Traffic Engineer, City of Oakland, personal communication, June 28, 1994.
- 5 I. Jeeva, Supervising Traffic Engineer, City of Oakland, personal communication, June 28, 1994.
- 6 Airport Roadway Project EIR Transportation Study, Korve Engineering, August 1993;
I. Jeeva, Supervising Traffic Engineer, City of Oakland, personal communication, June 28, 1994.

6.0 IMPACT OVERVIEW

6.1 GROWTH-INDUCING IMPACTS

CEQA *Guidelines* Section 15125 (g) requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined as "the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." The environmental effects of this growth are considered to be secondary or indirect impacts of the project.

Various factors determine and influence population growth and development in an area. These include plans and policies of local communities, counties, special districts, and regional agencies; availability of services such as treated water, wastewater treatment and disposal, fire protection, and public schools; transportation system capacity; the inventory of developable land; land costs; employment trends; and other economic considerations. Any one of these factors could represent a major, or even singular, constraint to development. The removal of an obstacle to future growth has growth-inducing potential and is considered a growth-inducing impact.

The proposed project would directly foster economic growth. Approval and development of the proposed project would result in the construction of 250,000 gross square feet (gsf) of value-oriented retail uses that would produce a total of 502 net new jobs (primary and secondary) in the City of Oakland. Price-Costco has announced its intention to close its existing Davis Street Costco in San Leandro; the EIR analysis assumes that 75% the San Leandro Store's its workers (107 jobs) would relocate to the new Costco at the Coliseum Shoreline site. Both the inducement of new jobs and the relocation of existing jobs in Oakland resulting from the proposed project would not significantly affect demand for retail goods and services or housing. No growth in population in Oakland is anticipated from the proposed project, either from new project employment or from changes in residence attributable to the transfer of Price-Costco employees from its existing San Leandro store to the proposed Coliseum Shoreline Price-Costco.

The proposed project would be built in a developed urban area, and no expansion of the municipal infrastructure (excluding connection of new structures to existing main lines) would be required to accommodate operation of the new development or the increased employment induced by the project.

6.2 CUMULATIVE IMPACTS

The CEQA *Guidelines* define cumulative impacts as two or more individual effects which, when considered together, are significant, or which can compound or increase other environmental impacts. CEQA *Guidelines* Section 15130 requires consideration in an EIR of potential environmental impacts that are individually limited but cumulatively significant. These impacts can result from the proposed project alone or together with other projects. "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects."

In considering cumulative impacts, the CEQA *Guidelines* allows the use of a list of relevant projects or a summary of projections in an adopted planning document. For the purposes of this EIR the following list of recently approved and/or anticipated future projects was used:⁸

- Oakland Coliseum Arena Expansion Project
- Coliseum Area Redevelopment Plan
- Fruitvale BART Project
- 98th Avenue Widening Project
- I-880 Interchange Improvements at Hegenberger Road and 98th Avenue
- 2002 Airport Development Program
- BART-Oakland Airport Intermodal Connector Project

In this EIR, approved and/or anticipated projects were chosen from the list for evaluation based on the type of environmental impact evaluated, and the location and extent of probable impacts. For some types of impacts, some of the projects were not evaluated because they would not likely result in a cumulative impact when considered with the proposed project.

Cumulative impacts are identified in Sections 4.1 through 4.11 of this report and are summarized below.

Visual Quality

Impact 4.3-4 (Cumulative): The proposed project, in conjunction with existing and future development, would contribute to a cumulative loss of visual open space in the San Leandro Bay shoreline area. (Less than Significant)

Traffic, Transportation, Circulation and Parking

I-880 Northbound Freeway Weave

Impact 4.4-10 (Cumulative): Under Existing plus Project Traffic Conditions without Coliseum Events, during both peak hours, the weaving vehicles would be under LOS D conditions and the non-weaving vehicles would be at LOS C. Weaving operations would be unconstrained. However, under Existing plus Project Traffic Conditions with Coliseum Event Traffic during the weekend noon peak, the weaving vehicle movements would be at LOS D and would be constrained. With the addition of Cumulative Coliseum Event Traffic, operations would become constrained for weaving vehicles during the weekday PM peak. Under Year 2010 conditions, weaving vehicle operations during the weekday PM peak would worsen further to LOS E. (SIGNIFICANT)

Hydrology and Water Quality

Impact 4.8-2 (Cumulative): The proposed project would increase pollutant loads carried by surface runoff generated at the site and would contribute to cumulative deterioration of runoff quality. (SIGNIFICANT)

6.3 SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

According to CEQA *Guidelines* Section 15126 (e), the purpose of this section is to "describe the cumulative and long-term effects of the proposed project which adversely affect the state of the environment. Special attention should be given to impacts that narrow the range of beneficial uses of the environment or pose long-term risks to health or safety. In addition, the reasons why the proposed project is believed by the sponsor to be justified now, rather than reserving an option for further alternatives, should be explained."

The proposed project would develop 250,000 gsf of value-oriented retail uses with associated parking and dedicated open space that would provide pedestrian access to Damon Slough on a currently undeveloped site. Proposed development would fill approximately 2.2 acres of man-induced palustrine emergent wetlands that have low habitat value. The proposed Coliseum Shoreline Project would intensify land uses on-site, while creating economic activity in Oakland.

SHORT-TERM ENVIRONMENTAL EFFECTS

Short-term, temporary environmental effects of the proposed project would result from site grading and construction activities, including removal of excavation materials from the project site, pile driving, and the connection of new users to existing infrastructure systems (e.g. water

lines, sewage and storm drainage systems, and electrical lines). Construction of the proposed project would also result in the short-term beneficial effect of creating an estimated 64.3 person-years of construction-related employment.

LONG-TERM ENVIRONMENTAL EFFECTS

Long-term environmental effects of the project would result from construction and operational characteristics of the proposed project.

Construction

Construction of the proposed project, in conjunction with existing and future development would contribute to a cumulative, long-term loss of existing visual open space in the San Leandro Bay Shoreline area and would alter the undeveloped character of the project site and surrounding areas. The proposed project would also permanently fill 2.2 acres of man-induced palustrine emergent wetlands on-site and create approximately 22.59 acres of impervious surface area which would increase pollutant loads through increased storm water runoff. In addition, new structures built under the proposed project would alter views of the site over the long-term from publicly accessible viewpoints within one-mile of the project site including I-880, Oakport Street, Hassler Way, 66th Avenue, Coliseum Arena and Martin Luther King Jr. Regional Shoreline, as well as longer distances.

Operational

The proposed project would result in additional traffic on I-880 and local street systems that would contribute over the long-term to future reductions in the operating levels-of-service at local intersections and the I-880 Southbound off-ramp at 66th Avenue during weekday pm peak hours and weekend noon peak hours. In addition, weaving vehicle movements on I-880 between Hegenberger and 66th Avenue would increase over the long-term, decreasing levels of service on this portion of I-880 during both peak hours. The additional vehicle trips generated by the project would result in the long-term emissions of nitrogen oxide and carbon monoxide in the project vicinity and increased ambient noise levels along local roadways. On-site ambient noise levels would also increase from vehicle circulation, commercial loading/unloading activities, and site maintenance equipment.

Project operation would result in long-term consumption of potable water supplies, generation of solid waste and would add typical commercial pollutants to storm water runoff from the site over the long term. Long term addition of employees to the project site would result in increased long-term risk of injury in the event of seismic activity.

Operation of the proposed Coliseum Shoreline Project would also have long-term beneficial effects, notably the creation of 502 net new jobs. The proposed project would also increase public access to the San Leandro Bay and Martin Luther King Jr. Regional Shoreline through its dedicated open space that would include a pedestrian walkway adjacent and parallel to Damon Slough. Completion of the site remediation program for contaminated soils before project construction would result in a beneficial effect by reducing the possibility for future groundwater contamination on-site.

6.4 SIGNIFICANT IRREVERSIBLE CHANGES

The purpose of this section is to enumerate the uses of nonrenewable resources that would result from the project, and the significant irreversible environmental changes that would result from the commitment of resources used in the project.

Construction and operation of the proposed project would require an irreversible increase in expenditures of nonrenewable energy resources. Operation of the proposed project would irreversibly add daily and peak-hour vehicle trips to local streets, intersections and off-ramps of I-880. Additional vehicle trips would irreversibly contribute to a cumulative reduction in levels of service at area intersections. Project-generated vehicle trips would irreversibly increase v emissions of nitrogen oxide and carbon monoxide and result in an irreversible increase in ambient noise levels along affected roadways. The project would irreversibly commit the currently vacant site to developed uses..

6.5 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

The significant effects of the project are listed in Sections 4.1 through 4.11 of this report. Mitigation measures that would reduce many of the significant impacts to a less than significant level are identified in those sections. The remaining, unavoidable significant impacts are as follows:

Traffic, Transportation, Circulation and Parking

Intersection 4: I-880 Southbound Off-ramp at 66th Avenue.

Impact 4.4-4: The eastbound approach to the intersection would operate at LOS F under existing conditions and would meet signal warrants. Under Existing plus Project Traffic Conditions without Coliseum Events, intersection operation would degrade further and the entire intersection would operate at LOS F. Under Existing plus Project Traffic Conditions with Coliseum Events and under Existing plus Project Conditions with Cumulative Coliseum Events, the intersection would operate at LOS F during the weekend noon peak, even if signalized. Although under all scenarios the intersection or one of its approaches would function at LOS F without project traffic, project traffic would further impair already unacceptable levels of service. Under Existing plus Project Traffic Conditions with Coliseum Events, the project contribution would increase the V/C ratio to greater than 1.2. **(SIGNIFICANT)**

Intersection 5: I-880 Northbound On-ramp at 66th Avenue

Impact 4.4-5: The addition of project traffic to Existing Traffic Conditions without Coliseum Events would degrade intersection operations from LOS E to LOS F. Signalization needed under existing traffic conditions would be sufficient to mitigate operations with the project. However, even with signalization, intersection operations would degrade to LOS F with a Volume-to-Capacity (V/C) ratio greater than 1.2, during the weekend noon peak for the scenarios with the Project and Coliseum events. **(SIGNIFICANT)**

I-880 Southbound Off-Ramp Only

Impact 4.4-7: Under Existing plus Project Traffic Conditions without Coliseum Events, the ramp would operate at LOS A during both peak hours. However, under Existing plus Project Traffic Conditions with Coliseum Events, and under Existing plus Project Traffic Conditions with Cumulative Coliseum Events, the ramp would function at LOS F during the weekend noon peak hour. **(SIGNIFICANT)**

I-880 Northbound Freeway Weave

Impact 4.4-10 (Cumulative): Under Existing plus Project Traffic Conditions without Coliseum Events, during both peak hours, the weaving vehicles would be under LOS D conditions and the non-weaving vehicles would be at LOS C. Weaving operations would be unconstrained. However, under Existing plus Project Traffic Conditions with Coliseum Event Traffic during the weekend noon peak, the weaving vehicle movements would be at LOS D and would be constrained. With the addition of Cumulative Coliseum Event Traffic, operations would also become constrained for weaving vehicles during the weekday PM peak. Under Year 2010 conditions, weaving vehicle operations during the weekday PM peak would worsen further to LOS E. **(SIGNIFICANT)**

6.6 EFFECTS FOUND NOT TO BE SIGNIFICANT

The Initial Study prepared by the City of Oakland (presented in Appendix A) found that the project did not have the potential to affect, or be affected by, the following:

- Unstable earth conditions, including mudslides, landslides or changes in geologic substructures either on- or off-site;
- Construction within one-quarter mile of an earthquake fault;
- Substantial depletion of a non-renewable natural resource or inhibition of its extraction;
- Alteration of air movement, moisture, temperature, or any change in climate, either locally or regionally;
- Alteration of the course of flood waters, or the exposure of people or property to water related hazards such as flooding or tidal waves;
- Change in groundwater quantity, through direct addition or withdrawal, or interception of an aquifer by cuts or excavation;
- Reduction in the numbers of any unique, rare or endangered species of plants or animals;
- Introduction of new species of plants or animals into an area, or result in a barrier to the replenishment of existing plant species, or the migration or movement species;
- Increase in existing ambient noise levels near sensitive noise receptors;
- Production of shade and shadow, or otherwise diminish sunlight or solar access;
- Conflict with approved plans for the area or the Oakland Comprehensive Plan or alter the present or planned land use of an area;
- Require relocation of residents an/or businesses, or affect existing housing or create a demand for additional housing;
- Possible interference with an emergency response plan or emergency evacuation plan;
- Destroy, deface or alter a structure, object, natural feature, or site of prehistoric historic, architectural, archeological or aesthetic significance;
- Result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object;
- Involve an increase of 100 feet or more in the height of any structure over any previously existing adjacent structure; and
- Use or encourage use of substantial quantities of fuel or energy.

NOTES - Impact Overview

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USDA Soil Conservation Service, *Soil Survey of Alameda County, California - Western Part*, United States Department of Agriculture, Soil Conservation Service, in cooperation with the University of California Agricultural Experiment Station, 1981.

USGS Working Group on California Earthquake Probabilities, Probabilities of Large Earthquakes in the San Francisco Bay Region, California. USGS Circular no. 1053, 1990.

Waste Management of Alameda County, "Annual Tonnage Reports", Altamont Landfill and Resource Recovery Facility, 1993.

Williams, Cleve, Director, City of Oakland's Office of Parks and Recreation, letter, 26 October 1993.

Wong, Ken, Supervising Civil Engineer, Oakland Department of Public Works, personal communication, May 12, 1994

Woodward-Clyde Consultants, *Preliminary Geotechnical Investigation, Oakport Street Property Oakland, California*, prepared for the City of Oakland, Environmental Affairs Division, June 22, 1993.

APPENDIX A

Initial Study

City of Oakland
Oakland, California

File No. ER93-49

Ref. No. _____

INITIAL STUDY AND ENVIRONMENTAL REVIEW CHECKLIST
California Environmental Quality Act (CEQA)

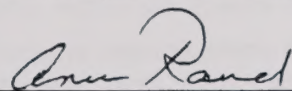
- I. PROJECT PROPONENT: City of Oakland, Office of Economic Development and Employment
- II. PROJECT NAME: Coliseum Shoreline Center
- III. PROJECT ADDRESS AND LOCATION: West of Oakport Street and Interstate 880, between Hassler Way and the Damon Channel
- IV. LEAD AGENCY: City of Oakland
Office of Planning and Building
421 14th Street, Room 100
Oakland, CA 94612
- Agency Contact: Stanley Muraoka Telephone No. (510) 238-3940
- V. ENVIRONMENTAL DETERMINATION:

On the basis of this initial environmental evaluation:

- ☐ I find that the proposed project *could not* have a significant effect on the environment, and a Negative Declaration will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached *mitigation measures* have been incorporated into the project. Therefore, a **Mitigated Negative Declaration** will be prepared.
- ☒ I find that the proposed project *may* have a significant effect on the environment, and an **Environmental Impact Report (EIR)** is required to assess the effects on the environment.

ALVIN D. JAMES
Deputy Director for City Planning

By: ANU RAUD
Environmental Review Coordinator



Signature

3/24/94

Date

VI. DESCRIPTION OF THE PROJECT: Development of a vacant, undeveloped site as a value oriented retail center, consisting of 250,000 gross square feet of retail development plus surface parking. Retail development would include a 135,000 square foot "Big Box," 115,000 square feet of other value oriented retail uses, and approximately 724 parking spaces. The site is located in the M-40 Heavy Industrial Zone, which requires a major conditional use permit for a retail use that exceeds 3,000 square feet and involves over one acre of land.

VII. DESCRIPTION OF THE ENVIRONMENTAL SETTING: The 22.6 acre project site is a vacant, flat parcel at an elevation similar to Interstate 880. Adjacent to the north is Damon Channel, which discharges to San Leandro Bay and Damon Marsh. To the southwest, across San Leandro Bay, is Arrowhead Marsh.

VIII. ENVIRONMENTAL EFFECT

Earth. Will the proposal result in:

1. Unstable earth conditions, including mudslides, landslides or changes in geologic substructures either on or off-site?

<u> </u>	<u> X </u>	<u> </u>
Yes	No	Maybe

Comment: According to the U.S. Soils Conservation Service Soils Classification, the soils on the site are characterized as urban land. These soils have certain development limitations that should be recognized by the proposed engineering and structural design prior to construction. With these soils characteristics kept in mind, the development of the proposal should not have a significant adverse effect on the site.

The proposal is located outside of the geographical areas of the City that are most susceptible to landslides and severe erosion as delineated in the Environmental Hazards Element of the Oakland Comprehensive Plan. Therefore, the proposal should not have a significant adverse effect.

Source: Environmental Hazards Element of the Oakland Comprehensive Plan; U.S. Soils Conservation Service Soils Maps, Western Alameda County.

2. Any increase in wind or water erosion of soils, either on or off-site, due to increased water runoff caused by conversion of pervious to impervious surfaces or to other factors?

<u> </u>	<u> </u>	<u> X </u>
Yes	No	Maybe

Comment: Although onsite erosion by wind or water may be temporarily increased due to construction period activities, appropriate erosion control measures will be included as part of the proposed project. Long-term erosion potentials would be addressed through installation of project landscaping and storm drainage facilities, both of which would be designed to meet all applicable regulations.

Source: Oakland Office of Economic Development and Employment.

3. Changes in deposition or erosion that result in changes in siltation, deposition or erosion which may modify the channel of a creek, inlet, lake, or any other waterway?
Yes
No X
Maybe

Comment: Although onsite erosion by wind or water may be temporarily increased due to construction period activities, appropriate erosion control measures will be included as part of the proposed project. Long-term erosion potentials would be addressed through installation of project landscaping and storm drainage facilities, both of which would be designed to meet all applicable regulations.

Source: Oakland Office of Economic Development and Employment.

4. Major changes in topography or ground surface relief features, or disruptions, displacements, compaction or overcovering of the soil?
Yes
No X
Maybe

Comment: Preliminary investigation of the site has identified the presence of low-value seasonal wetlands associated with drainage features on the western portion of the site. Development of these habitat areas could reduce the overall quantity of seasonal wetlands in the vicinity; however, because of the marginal ecologic value of the identified onsite areas and the demonstrated absence of unique, rare or endangered species therein, this reduction would be expected to have negligible effects.

Source: Preliminary engineering design by the Oakland Office of Economic Development and Employment.

5. Construction on loose fill or other unstable land that might expose people or property to geologic hazards, such as earthquakes, liquefaction or ground failure, or similar seismic hazards?
Yes
No X
Maybe

Comment: The project site is located in Soil Zone I, an area characterized as susceptible to differential settlement and liquefaction (The Environmental Hazards Element of the Comprehensive Plan, 1974). These inherent adverse potentials would be addressed through foundation design, which could include use of subsurface piles. Preliminary soils investigation and engineering design is being conducted by certified professionals with City peer review.

Source: Environmental Hazards Element of the Oakland Comprehensive Plan; Oakland Office of Economic Development and Employment.

6. Construction within one-quarter mile of an earthquake fault?
Yes X
No
Maybe

Comment: The project is located approximately 2.5 miles from the Hayward fault, and is outside of the Alquist-Priolo Geologic Hazards Zone Act Special Studies Zone. Therefore, the project will not be required to meet the development standards and criteria within the Special Studies Zone.

Source: Alquist-Priolo Special Studies Zone Map.

7. Substantial depletion of a nonrenewable natural resource or inhibition of its extraction?
Yes X
No
Maybe

Comment: The City of Oakland is generally a built out, urban community. The nature of development in Oakland is typically in-fill. Therefore, this proposal will not significantly deplete a nonrenewable resources or inhibit its extraction.

The operation of the proposed project will not include nor encourage any on-site quarrying, mining, dredging, or extraction activity. Therefore, the project will not substantially deplete or inhibit the extraction of a nonrenewable natural resource.

Source: Open Space, Conservation and Recreation (OSCAR) Element of the Oakland Comprehensive Plan; Project description.

Air and Water. Will the project result in:

8. Substantial air emissions, deterioration of ambient air quality or the creation of objectionable odors?

<u> </u>	<u> </u>	<u> X </u>
Yes	No	Maybe

Comment: Project construction could result in temporary but substantial dust emissions. Such potentials would be addressed by implementation of dust control measures. Long-term project operation could result in CO "hotspots" at roadway congestion points. Traffic mitigations would be expected to reduce potential impacts to the extent possible.

Source: Bay Area Air Quality Management District (BAAQMD) Air Quality and Urban Development; Project description.

9. Alteration of air movement, moisture, temperature, or any change in climate, either locally or regionally?

<u> </u>	<u> X </u>	<u> </u>
Yes	No	Maybe

Comment: The scale of the project will not result in any significant alteration in air movement or changes in climate.

Source: Staff field visit to project site area on 3/14/94; Project description.

10. Discharge into surface waters resulting in substantial degradation of surface water quality, including but not limited to turbidity, absorption rates, drainage patterns, or the rate or amount of surface runoff?

<u> </u>	<u> </u>	<u> X </u>
Yes	No	Maybe

Comment: The proposed development will alter the natural drainage pattern on the site. During construction, surface drainage should be redirected away from the area of construction. After construction, the introduction of new impervious surfaces such as the driveway pad, rooftops, and decks, will decrease areas of soil saturation, and increase surface flow into the storm drain. Adverse effects during project operation would be minimized through installation of storm drainage facilities designed to meet all applicable regulations.

Source: Oakland Office of Economic Development and Employment.

11. Alterations to the course of flood waters, or the exposure of people or property to water related hazards such as flooding or tidal waves?

<u> </u>	<u> X </u>	<u> </u>
Yes	No	Maybe

Comment: The project site is located in Zone B as shown on the Federal Insurance Rate Map (FIRM floodplain maps). In addition, the Environmental Hazards Element indicates that the site is not in an area of potential inundation by tsunamis. Therefore, the project will not expose people or property to water related hazards.

Source: Fire Insurance Rate Map (FIRM) Floodplain Maps, Federal Emergency Management Administration (FEMA); Environmental Hazards Element of the Oakland Comprehensive Plan.

12. Change in groundwater quantity, through direct addition or withdrawal, or interception of an aquifer by cuts or excavation?
Yes X
No
Maybe

Comment: The source of potable water for the City is supplied by EBMUD. In this built out, urban area, no groundwater under the City is used as potable water. Therefore alteration of the underground aquifers would not have significant environmental effect on public health or safety. The proposal will not involve cuts or excavations to depths that might intercept an aquifer.

Source: Project description; "Updated Water Supply Management Program EIR," EBMUD, September 1993.

Biotic. Will the project result in:

13. Reduction in quantity or diversity of plant and animal species in the project vicinity, interfere with migratory or other natural movement patterns, degrade existing habitats or require extensive vegetation removal?
Yes
No X
Maybe

Comment: Preliminary biotic investigation of the site has identified the presence of low-value seasonal wetlands associated with drainage features on the western portion of the site. Development of these habitat areas could reduce the overall quantity of seasonal wetlands in the vicinity; however, because of the marginal ecologic value of the identified onsite areas and the demonstrated absence of unique, rare or endangered species therein, this reduction would be expected to have negligible effects.

Source: OSCAR Element of the Oakland Comprehensive Plan; Site visit on 3/14/94.

14. Reduce the numbers of any unique, rare or endangered species of plants or animals?
Yes X
No
Maybe

Comment: No unique, rare or endangered species are expected to be present.

Special studies conducted according to California Department of Fish and Game guidelines, have demonstrated the absence of unique, rare or endangered species. Therefore, the project is not expected to have a significant adverse effect.

Source: OSCAR Element of the Oakland Comprehensive Plan; California Department of Fish and Game (CDFG), Natural Diversity Database; Consultation with East Bay Regional Parks District (EBRPD) staff; Preliminary project biotics analysis.

15. Introduction of new species of plants or animals into an area, or result in a barrier to the replenishment of existing plant species, or the migration or movement of animals?
Yes X
No
Maybe

Comment: The proposed project is located in an essentially built out urbanized area and will not have a significant effect on plants and animal species movement or migration.

Source: Site visit on 3/14/94.

16.	Deterioration to existing aquatic or wildlife habitat?	<u> </u>	<u> </u>	<u> X </u>
		Yes	No	Maybe

Comment: The proposed project is located adjacent to Damon Channel and therefore, may have a effect on existing aquatic or wildlife habitat. Temporary discharges into surface waters could occur due to construction period activities. Appropriate drainage control measures will be included as part of the proposed project. During project operation, discharges would be precluded through installation of storm drainage facilities designed to meet all applicable regulations.

Source: OSCAR Element of the Oakland Comprehensive Plan; Site visit on 3/14/94.

Noise. Will the project result in:

17.	Increase in existing ambient noise levels near sensitive noise receptors?	<u> </u>	<u> X </u>	<u> </u>
		Yes	No	Maybe

Comment: The proposed project is located in an essentially built out urban area near a noise generating land use such as an industrial zone, or railroad line, or highway, or BART, where the introduction of the project would not significantly increase the ambient noise levels.

Source: Noise Element of the Oakland Comprehensive Plan; Project description; Site visit on 3/14/94.

18.	Exposure of people to severe noise levels?	<u> </u>	<u> </u>	<u> X </u>
		Yes	No	Maybe

Comment: Preliminary analysis of the project noise environment indicates onsite noise levels to be within acceptable limits for commercial and industrial facilities. However, due to the proximity of the site to Interstate 880, there may be some potential for exposure of people to severe noise levels. The project layout would be expected to minimize such potentials.

Source: Site visit on 3/14/94; Preliminary project noise analysis.

Light and Glare. Will the project result in:

19.	Produce new light or glare in areas sensitive to light and glare (i.e., residents near industrial and commercial uses, freeways, and parks)?	<u> </u>	<u> </u>	<u> X </u>
		Yes	No	Maybe

Comment: The project site is adjacent to and visible from Interstate 880. This proximity of the site to the Interstate could result in adverse light and glare impacts on motorists on the freeway, as well as at other nearby locations. Project design would be expected to reduce such potentials to the extent possible.

Source: Site visit on 3/14/94.

20.	Produce shade and shadow, or otherwise diminish sunlight or solar access?	<u> </u>	<u> X </u>	<u> </u>
		Yes	No	Maybe

Comment: The proposed building height, setbacks and bulk are consistent with surrounding buildings. The proposal will not have a significant adverse effect.

Land Use and Socioeconomic Factors. Will the project result in:

21. Conflict with approved plans for the area or the Oakland Comprehensive Plan or alter the present or planned land use of an area?

Yes No Maybe

Comment: The proposed use is permitted in the M-40 Heavy Industrial Zone with a conditional use permit because the retail use is over 3,000 square feet and the development site is greater than one acre in size.

Source: Land Use Element of the Oakland Comprehensive Plan ; Oakland Zoning Regulations: Section(s) 5800, 9200.

22. Require relocation of residents and/or businesses, or affect existing housing or create a demand for additional housing?

Yes No Maybe

Comment: The proposal will not require the relocation of businesses or residents. Site is vacant

Source: Site visit on 3/14/94.

23. Cause a substantial alteration in neighborhood land use, density or character?

Yes No Maybe

Comment: The proposed development is consistent in terms of land use density and character with the vicinity. On the other hand, because it would develop an existing vacant site with commercial retail use, there could be some potentials for inducing the location of other similar uses in the area.

Source: Project site plan; Site visit on 3/14/94.

Human Health and Risk of Upset. Will the project involve:

24. The risk of an explosion or the release of hazardous substances, including oil, pesticides, chemicals or radiation, in the event of an accident that could create or expose people to potential health hazards?

Yes No Maybe

Comment: The site is on the CERCLIS list; however, site remediation plans have been found acceptable by the U.S. Environmental Protection Agency (EPA). It would be expected that upon completion of the remediation, hazardous materials potentials would be less-than-significant.

Source: Project Description and other submittals: Preliminary site hazardous materials assessment; Other Regulatory Agencies: EPA; Port of Oakland.

25. Possible interference with an emergency response plan or emergency evacuation plan?

Yes No Maybe

Comment: Upon review of the goals and objectives of the City's Multi-Hazard Functional Plan ("City Emergency Plan") in comparison to the proposal, it can be determined that the proposal will

not significantly interfere with the emergency routes tentatively identified by the plan. In addition, the proposal is within the scale of development as delineated in the Oakland Comprehensive Plan.

Source: Multi-Hazard Functional Plan (City Emergency Plan) for the City of Oakland.

Transportation/Circulation: Will the project result in:

26. Substantially increase vehicular movement resulting in traffic hazards to motor vehicles, bicyclists, or pedestrians; or create a demand for new parking facilities?

<u>X</u>	<u> </u>	<u> </u>
Yes	No	Maybe

Comment: The site is currently undeveloped and does not generate substantial traffic. The overall effect of the project would be to increase traffic to and from the site along with the availability of dedicated parking. It is expected that the project will be designed to reduce associated adverse effects to the extent possible.

Source: Institute of Traffic Engineers (ITE) Trip Generation/ITE Parking Generation; Preliminary project traffic analysis.

27. Alterations to present patterns of circulation or movement of people and/or goods, or alterations to waterborne, rail or air traffic?

<u>X</u>	<u> </u>	<u> </u>
Yes	No	Maybe

Comment: The proposal could have a significant effect on the pattern of circulation in the vicinity of the project by introducing retail activity on a currently vacant site.

Source: OPW, Traffic Engineering Division; Preliminary project traffic analysis.

28. Have a substantial impact on existing transportation systems or circulation patterns?

<u> </u>	<u> </u>	<u>X</u>
Yes	No	Maybe

Comment: Because the site is currently undeveloped and does not generate substantial traffic, the overall effect of the project would be to increase traffic to and from the site. Accordingly, the project will necessitate improvement of Oakport street and may require improvements at nearby intersections.

Source: OPW, Traffic Engineering Division; Preliminary project traffic analysis.

Public Services and Utilities: Will the project have an effect upon, or result in a need for new or altered public services in any of the following areas:

29. Impose a burden on public services or facilities including fire, solid waste disposal, police, schools or parks?

<u> </u>	<u> </u>	<u>X</u>
Yes	No	Maybe

Comment: The site is currently undeveloped and does not generate substantial needs for public services. When completed, the project will generate needs for various public services. The project sponsor will be required to coordinate with affected service providers to ensure continued adequate service to the vicinity.

Source: Site visit on 3/14/94; Project description.

- | | | | | |
|-----|--|--------------------------|-------------------------|-----------------------|
| 30. | Impose a burden on existing utilities including roads, electricity, gas, water and sewers? | <u> </u>
Yes | <u> </u>
No | <u> X </u>
Maybe |
|-----|--|--------------------------|-------------------------|-----------------------|

Comment: The site is currently undeveloped and does not generate substantial needs for public utilities. When completed, the project will generate needs for various public utilities. The project sponsor will be required to coordinate with affected utility service providers to ensure continued adequate service to the vicinity.

Source: Site visit on 3/14/94; Project description.

Cultural Resources. Will the project:

- | | | | | |
|-----|--|--------------------------|--------------------|----------------------------|
| 31. | Destroy, deface or alter a structure, object, natural feature or site of prehistoric historic, architectural, archeological or aesthetic significance? | <u> </u>
Yes | <u> X </u>
No | <u> </u>
Maybe |
|-----|--|--------------------------|--------------------|----------------------------|

Comment: On the basis of the information available for the project area and vicinity, the proposal could not have a significant effect on the historic or prehistoric resources in the project area. Essentially, the site was historically marshland which has been actively filled over many years.

Source: Oakland Cultural Heritage Survey; Preliminary Citywide Historical and Architectural Inventory; Site visit on 3/14/94; Aerial photographs of the site; Port of Oakland records.

- | | | | | |
|-----|--|--------------------------|--------------------|----------------------------|
| 32. | Result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? | <u> </u>
Yes | <u> X </u>
No | <u> </u>
Maybe |
|-----|--|--------------------------|--------------------|----------------------------|

Comment: On the basis of the information available for the project area and vicinity, the proposal will have a significant effect on the historic or prehistoric resources in the project area. The site itself is vacant; and there are no historic or prehistoric resources in the project area.

Source: Oakland Cultural Heritage Survey; Site visit on 3/14/94.

Aesthetics. Will the project result in:

- | | | | | |
|-----|---|--------------------------|--------------------|----------------------------|
| 33. | Involve an increase of 100 feet or more in the height of any structure over any previously existing adjacent structure? | <u> </u>
Yes | <u> X </u>
No | <u> </u>
Maybe |
|-----|---|--------------------------|--------------------|----------------------------|

Comment: The height of the proposal will not result in a 100 foot increase in height over existing structures. Therefore, the project will not have a significant adverse effect.

Source: Site visit on 3/14/94; Project description.

- | | | | | |
|-----|---|--------------------------|--------------------|----------------------------|
| 34. | The obstruction of any scenic vista or view open to the public? | <u> </u>
Yes | <u> X </u>
No | <u> </u>
Maybe |
|-----|---|--------------------------|--------------------|----------------------------|

Comment: The proposal will not result in the obstruction of any scenic vista or view open to the public. The site is adjacent to a warehouse and a multi-story office building; development of the vacant, undeveloped project site would enhance local area views.

Source: Scenic Highways Element of the Oakland Comprehensive Plan; OSCAR Element of the Oakland Comprehensive Plan; Land Use Element of the Oakland Comprehensive Plan; Site visit on 3/14/94; Project description.

Energy. Would the project:

35. Use or encourage use of substantial quantities of fuel or energy?

 Yes X
 No
 Maybe

Comment: The proposal will be required to comply with the Title 24: Energy Conservation requirements of the Uniform Building Code. In addition, scale of the proposal is within the capacity of fuel and energy resources, both available now and planned for by Pacific Gas and Electric Company (PG & E).

Source: OPB, Engineering Services; Project description.

IX. MANDATORY FINDINGS OF SIGNIFICANCE (An EIR is required if the answer to any of the following questions is "yes" or "maybe".)

	<u>Yes</u>	<u>No</u>	<u>Maybe</u>
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of an aquatic or wildlife species, cause a aquatic or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal species, or eliminate important examples of the major periods of California history or prehistory?	<u> </u>	<u> X </u>	<u> </u>

b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.	<u> </u>	<u> </u>	<u> X </u>
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Comment: Due to the location and visibility of the site, the project has growth inducement potentials for the surrounding vicinity. Specifically, successful implementation of the project may enhance development potentials at remaining vacant parcels in the local area, and at nearby existing underutilized parcels.

c. Does the project have impacts that are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant).	<u> </u>	<u> </u>	<u> X </u>
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Comment: Given overall traffic volumes and conditions on Interstate 880, project traffic in combination with traffic generated by other proposed developments along the freeway, could have potentially significant transportation and air quality effects.

d. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<u> </u>	<u> X </u>	<u> </u>
---	-------------------	--------------	-------------------

X. DETERMINATION

On the basis of this initial environmental evaluation:

- ☐ I find that the proposed project *will not* have a significant effect on the environment, and a Negative Declaration will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the attached *mitigation measures* have been incorporated into the project. Therefore, a **Mitigated Negative Declaration** will be prepared.
- ☒ I find that the proposed project *may* have a significant effect on the environment, and an **Environmental Impact Report** is required to assess the effects on the environment.

Name Stanley Muraoka Date March 24, 1994

Title Planner II

APPENDIX B

Notice of Preparation and Responses



OFFICE OF PLANNING & BUILDING • 1330 BROADWAY • OAKLAND, CALIFORNIA 94612

City Planning Services

**NOTICE OF PREPARATION
OF DRAFT ENVIRONMENTAL IMPACT REPORT**(510) 238-3941
TDD 839-6451
FAX: 238-6538

The Oakland Office of Planning and Building is preparing an Environmental Impact Report (EIR) for the project identified below, and we are requesting your comments on the scope and content of the EIR. We have prepared an "Initial Study" that identifies areas of probable environmental effects. These probable environmental effects are summarized below. The Initial Study is available at the Planning Division of the Office of Planning and Building.

The City of Oakland is the Lead Agency for this project, which means that we are the public agency with the greatest responsibility for either approving it or carrying it out. We are sending this notice to Responsible Agencies and other interested parties. Responsible Agencies are those public agencies, besides the City of Oakland, that also have a role in approving or carrying out the project. Responsible Agencies will need to use the EIR that we prepare when considering approvals related to the project.

When the Draft EIR is published, it will be sent to all Responsible Agencies and to others who respond to this Notice of Preparation or who otherwise indicate that they would like to receive a copy.

Please send us any response you may have within 30 days from the date you receive this notice. Your response, and any questions or comments, should be directed to Stanley Muraoka, Oakland Office of Planning and Building, Planning Division, 421 14th Street, Oakland, CA 94612, telephone 273-3940. Please reference case number ER93-49 in your response.

The Office of Planning and Building will hold a public scoping meeting on the Notice and EIR on Wednesday, April 20, 1994 at 2:00 PM. The meeting will be held in the Planning Division conference room at 1330 Broadway, Suite 310, Oakland, California. All Agencies and interested parties are invited to attend.

PROJECT TITLE: Coliseum Shoreline Retail Center

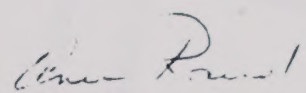
PROJECT LOCATION: Bounded by 66th Avenue on the north, Interstate 880 and Oakport Street on the east, Hassler Way on the south, and industrial development within the Oakland Airport Business Park on the west. (See map on reverse.)

PROJECT SPONSOR: City of Oakland Office of Economic Development and Employment

PROJECT DESCRIPTION: Development of a vacant, undeveloped site adjacent to Interstate 880 and opposite the Oakland-Alameda County Coliseum as a value oriented retail center, consisting of 250,000 gross square feet of retail development plus surface parking. Retail development would include a 135,000 square foot "Big Box" and 115,000 square feet of other value oriented retail uses. The project would not result in any alterations to Damon Channel, which borders the site to the north.

PROBABLE ENVIRONMENTAL EFFECTS: Increases in traffic and related noise and air quality effects; temporary traffic circulation, air quality, and noise impacts during construction; increased demand for public services and utilities; effects on land use and policy conformity; aesthetic effects; impacts of hazardous materials; effects on drainage and water quality; seismicity and soils; employment impacts; effects on biotic resources; cumulative effects; and growth inducement.

DATE: March 24, 1994


ANU RAUD
Environmental Review Coordinator

File No. ER93-49



COLISEUM SHORELINE PROJECT SITE

north

City of Alameda California



April 27, 1994

Mr. Stanley Muraoka
City of Oakland
Office of Planning and Building
Planning Division
421 14th Street
Oakland, CA 94612

RE: Notices of Preparation - Coliseum Area Redevelopment Plan and Coliseum Shoreline
Retail Center

Dear Mr. Muraoka:

Thank you very much for the opportunity to provide comments on the above projects. Increases in traffic have been identified as potential impacts for both projects, and these increases are of particular concern to the City of Alameda. Therefore, the City of Alameda requests the Environmental Impact Reports ("EIR") address access to these sites/areas from Alameda and suggests the following analyses:

1. The impact on level of service at the following intersections should be included: Doolittle at Swan, Doolittle at Langly, Doolittle at Harbor Bay Parkway, and Doolittle at Island Drive.
2. In order to avoid overburdening Hegenberger, the proposed connection from 66th Avenue to Oakport Boulevard and Pardee Extension should be discussed as mitigations.
3. Please describe any impacts on the regional facilities, i.e. I-880, that may impact traffic flow for Alameda residents.
4. The cumulative impact analysis on traffic should include development proposed in the 2002 Airport Development Program at the Metropolitan Oakland International Airport.
5. Please include an analysis of the projects' impact on BART usage. Please note that Coliseum events already tax BART past its capacity. The Oakland Air BART Connector plans should also be addressed in these EIRs.
6. Please address bus service and the impact of these projects on this service.

Please provide us with copies of the Draft Environmental Impact Reports once they are available.

Again, thank you for the opportunity to comment.

Sincerely,

Colette Meunier
Colette Meunier
Planning Director

CM:CE... \COLISEUM.NOP

xc: City Manager
City Attorney
Community Development Director
Public Works Director
Transportation Manager

FILE: OAKLAND - COLISEUM EIRS

Planning Department, Room 102

City Hall
2263 Santa Clara Avenue - 94501-4454
Tel: 510.748 4554

April 26, 1994

Stanley Muraoka
Office of Planning and Building-Planning Division
421 14th Street
Oakland, CA 94612

RE: ER 93-49: Notice of Preparation of Draft Environmental Impact Report for the Coliseum Shoreline Retail Center

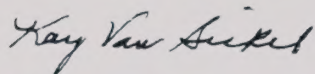
Dear Mr. Muraoka:

Thank you for the opportunity to provide comments regarding the scope and content of the Draft Environmental Impact Report. Without knowing the more detailed plans for the area surrounding the proposed project site, the following is a partial list of issues and concerns that AC Transit would like addressed in the Coliseum Shoreline Retail Center Draft EIR.

- The project area is approximately a half-mile from Coliseum BART where AC Transit operates the following lines: 46, 49, 56 and 98. Within the general area of the project, AC Transit also operates Lines 45 and 58. Thus, the project area is fairly well served by public transit and efforts should be made to encourage its use.
- The project area needs to provide good pedestrian access to transit stops along the perimeter of the site. Line 98 currently operates along Oakport and Hassler (boundaries of the proposed project) and at an average frequency of 15-30 minutes throughout the week. Additionally, Line 98 has a bus stop on Hassler at Oakport which appears to be in the north-eastern corner of the proposed project site.
- The NOP mentions 250,000 gross square feet of retail development plus *surface parking*. No specific details are given with regard to the number of parking spaces that would be made available. Because the project area is already well served by public transit, additional parking should be kept to a minimum. If parking space minimums are required, the City of Oakland might consider lowering the parking spaces per square foot thus facilitating reliance on existing and planned transit service, and reducing additional congestion in the surrounding area.

Once again, thank you for the opportunity to comment on this process. Please continue to include AC Transit on the circulation list for environmental documents related to this project. If you have further questions, please contact Tina Konvalinka, Senior Planner, at 891-4754.

Sincerely,

A handwritten signature in cursive script that reads "Kay Van Sickel".

Kay Van Sickel
Assistant General Manager
Service Development and Marketing

cc: Tina Konvalinka
Eileen Lee
Darton Ito

ref:col_shrl.nop

EAST BAY REGIONAL PARK DISTRICT

April 26, 1994

BOARD OF DIRECTORS

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Mr. Stanley Muraoka
Planning Department
City of Oakland
421 14th Street
Oakland, CA 94612

Pat O'Brien
General Manager

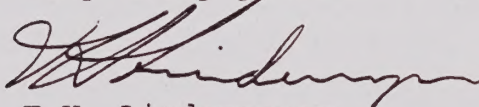
SUBJECT: EIR FOR THE COLISEUM SHORELINE RETAIL CENTER
(C.N.-ER93-49)
MARTIN LUTHER KING REGIONAL SHORELINE

Dear Mr. Muraoka:

The East Bay Regional Park District has received the Notice of Preparation for the subject project and offers the following comments. As you know, the District operates the Martin Luther King Regional Shoreline nearby and downstream of the project site. The nearest facilities are the Garretson Point staging area and the office/corporation yard for that parkland. The District requests that the EIR address direct and/or indirect impacts upon these facilities and possible water quality impacts upon Damion Marsh and the waters of San Leandro Bay.

The contact person for this EIR is the undersigned who may be reached at 635-0138, extension 2622.

Very truly yours,



T.H. Lindenmeyer
Environmental Specialist

c:t\94\coliseum.ctr

DEPARTMENT OF FISH AND GAME

POST OFFICE BOX 47

YOUNTVILLE, CALIFORNIA 94599

(707) 944-5500



April 18, 1994

Mr. Stanley Muraoka
Oakland Office of Planning
and Building, Planning Division
421 14th Street
Oakland, California 94612

Dear Mr. Muraoka

Coliseum Shoreline Retail Center

Department of Fish and Game personnel have reviewed the subject project in Oakland, Alameda County. Due to personnel and time limitations for project review, we are unable to identify specific concerns to be addressed in the Draft Environmental Impact Report (DEIR).

The DEIR should address all potential impacts to biotic resources and mitigation measures, as well as alternatives which would avoid impacts. The site should be surveyed for the presence of sensitive species and habitats (i.e., wetlands). Impacts to wetlands and sensitive species should be avoided. We request that subsequent documents related to this project be submitted for our review.

The Department recommends the following overall measures to lessen or minimize impacts.

1. Avoidance or minimization of impacts to important wildlife habitats; i. e., wetlands, shorebird roosting areas, and habitat for sensitive plant and animal species. Buffers should be provided to protect sensitive habitats from disturbance.
2. Revegetation using native species.
3. Conformance with the Department Wetland Policy which requires no net loss of either wetland acreage or habitat value for unavoidable impacts.

The U. S. Army Corps of Engineers also has jurisdiction over the discharge of fill to streams and wetlands under Section 404 of the Clean Water Act. We recommend that the Corps be contacted to determine if they have jurisdiction and require a permit.

Mr. Stanley Muraoka
April 18, 1994
Page Two

If you have any questions concerning our comments, please contact Carl Wilcox, Environmental Services Supervisor, at (707) 944-5525.

Sincerely,

A handwritten signature in dark ink, appearing to read "Brian Hunter". The signature is fluid and cursive, with a large initial "B" and a long, sweeping underline.

Brian Hunter
Regional Manager
Region 3

cc: U. S. Army Corps of Engineers
San Francisco

Environmental Protection Agency
San Francisco

U. S. Fish and Wildlife Service
Sacramento

Regional Water Quality Control Board
Oakland

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

THIRTY VAN NESS AVENUE, SUITE 2011
SAN FRANCISCO, CALIFORNIA 94102-6080
PHONE: (415) 557-3686

May 5, 1994

Stanley Muraoka
City of Oakland
Office of Economic Development
and Employment
1330 Broadway
Oakland, California 94612

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report for the
Coliseum Shoreline Retail Center; BCDC Inquiry File Nos. AL.OA.6924.3
and MC.MC.7415.22

Dear Mr. Muraoka:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report for the Coliseum Shoreline Retail Center. The NOP is dated March 24, 1994 and was received in our office on April 6, 1994. The Commission has not reviewed the NOP, so the following staff comments are based on the San Francisco Bay Plan, the McAteer Petris Act and your description of the proposed retail project.

Jurisdiction

The Commission has "Bay" jurisdiction over all areas below the line of highest tidal action which is at 6.1 NGVD in this location. The Commission also has "shoreline band" jurisdiction over an area 100 feet upland and parallel to the line of highest tidal action. It appears that the Commission may have jurisdiction over the project; however, it is unclear which, if any portion of the project would lie within the Commission's shoreline band jurisdiction. The DEIR should clarify what project elements if any would lie within the Commission's jurisdiction and describe how the project would be consistent with the Commission's law and policies. Furthermore, on February 4, 1971, the Commission adopted a joint declaration made by the Commission and the Port of Oakland, which clarifies the Commission's jurisdiction in portions of San Leandro Bay. This declaration identifies the Coliseum Shoreline Retail Center site as Area No. 5. A copy of this joint declaration is attached for your information.

McAteer Petris Act and San Francisco Bay Plan

Use. Although your project is not located in a priority use area, Bay Plan Map No. 4 indicates that the potential exists for a scenic path from the Coliseum complex along Damon Channel to the Bay. The DEIR should discuss the potential for public access associated with this project to connect with existing or proposed public access.

Public Access. The DEIR should discuss whether the project would provide the maximum feasible public access to the Bay and its shoreline, as described below, and whether it would implement portions of the scenic trail mentioned above consistent with the Bay plan policies on public access. The Commission can only approve a project if it provides maximum feasible public access consistent with the project. The Bay Plan policies on public access, in part, state: "In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline....Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed....Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier-free access for the physically handicapped to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs....In some areas, a small amount of fill may be allowed if the fill is necessary--and is the minimum absolutely required--to develop the project in accordance with the Commission's public access requirements....Access to the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available...." The DEIR should discuss potential impacts on views to and from the Bay in evaluating the public access impacts of the project.

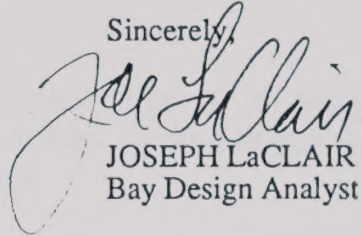
Marshes and Mudflats. The NOP states that the project would probably affect existing drainage and water quality. The Bay Plan policies on Marshes and Mudflats state, in part, that "marshes and mudflats should be maintained to the fullest possible extent to conserve fish and wildlife and to abate air and water pollution....marshes and mudflats are an integral part to the Bay tidal system and therefore should be protected in the same manner as open water areas....Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects on marshes and mudflats, and then modified as necessary to minimize any harmful effects....the quality of existing marshes should be improved by appropriate measures whenever possible. The DEIR should discuss the effects the project may have on marshes and mudflats and what mitigation is proposed to offset any adverse environmental effects on marshes and mudflats.

Water Quality. The NOP states that the project would probably affect water quality. The Bay Plan policies on Water Quality state, in part, that, "Bay water pollution should be avoided....Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the Regional Water Quality Control Board's Basin Plan....The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Water Quality Control Board, should be the basis for carrying out the Commission's water quality responsibilities....Shoreline projects should be designed and constructed in a manner that reduces soil erosion and protects the Bay from increased sedimentation through the use of appropriate erosion control practices....Polluted runoff from projects should be controlled by the use of best management practices in order to protect the water quality and beneficial uses of the Bay, especially where water dispersion is poor and near shellfish beds and other significant biotic resources....Whenever possible, runoff discharge points should be located where the discharge will have the least impact....Approval of projects involving shoreline areas polluted with hazardous substances should be conditioned so that they will

not cause harm to the public or the beneficial uses of the Bay. The DEIR should discuss the project's impacts on water quality and what steps would be taken to eliminate or minimize these impacts.

If you have any questions regarding the comments in this letter, please do not hesitate to phone me at (415) 557-3686.

Sincerely,



JOSEPH LaCLAIR
Bay Design Analyst

cc: Nadell Gayou, Resources Agency
Nandini Shridhar

DEPARTMENT OF TRANSPORTATION

BOX 23660

OAKLAND, CA 94623-0660

(510) 286-4444

TDD (510) 286-4454

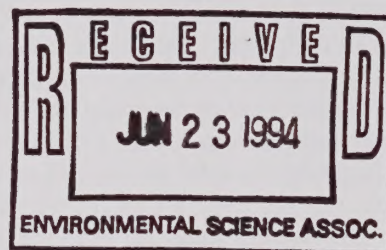


May 19, 1994

SCH#94043015

ALA 880 26.61

ALA880359



Mr. Stanley Muraoka
Office of Planning and Building
Planning Division
421 14th Street
Oakland, CA 94612

RE: NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT
REPORT FOR Coliseum Shore Retail Center

Dear Mr. Muraoka:

Thank you for including the California State Department of Transportation in the review process for this proposal. We have the following suggestions about the scope and content of information that should be included in the draft environmental impact report:

The Draft EIR for this project must assess the impact of this project on the State highway system and regional transportation system and provide mitigation for those impacts.

In order to clearly present information to decision makers and the public, any information from earlier environmental documents should be included in the Draft EIR and not merely referenced.

The traffic impact analysis must include an assessment of this proposal's impacts on, at least, the following facilities:

- State Route 880—mainline
- Interstate 880/Hegenberger Road Interchange
- Interstate 880/66th Avenue Interchange

The traffic study should include trip generation, distribution and assignment. The methodologies used in compiling the information should be explained.

Traffic information should be presented in terms of average daily traffic volumes, AM and PM peak hour volumes and level of service for the above listed facilities. Traffic data should be calculated for each of the following conditions:

- Existing traffic
- Existing plus project traffic
- Existing plus project plus cumulative traffic

Calculation of cumulative traffic volumes should consider all traffic generating development that would affect the facilities evaluated, and should not be limited to projects under the jurisdiction of the lead agency.

Diagrams illustrating traffic distribution and assignment, and a map showing the locations of approved projects in the vicinity should be included.

If the project is determined to have significant negative impacts on the operation of State facilities, feasible mitigation measures must be identified. The fact that mitigation on state highway facilities requires the participation of Caltrans and other parties in no way relieves the lead agency and project sponsor of the responsibility for mitigating negative impacts. Mitigation measures considered should include highway and non-highway improvements. Special attention should be given to the development of alternative solutions to circulation problems which do not rely on increased highway construction. The following mitigation measures should be given consideration:

- Financing of regional transportation facilities through the assessment of impact fees and/or the formation of an assessment district.
- Capital and operating funding for the extension of transit service into the project area.
- Measures to facilitate pedestrian and bicycle usage.

All mitigation proposed must be fully discussed in the environmental document. These discussions should include but not be limited to: cost, financing, scheduling, and implementation responsibilities.

Congestion on the transportation system is extremely costly. It is imperative that realistic and fundable mitigation be identified for all impacts to State highway facilities. If mitigation cannot be identified, City of Oakland should consider reducing the size of the proposed project.

The proposed project must have no significant impact on State drainage facilities.

A Caltrans Encroachment Permit will be required for any work done within the State right-of-way. Before an encroachment permit can be issued, a completed

5/19/94

Page 3

application, final environmental documentation and five (5) sets of plans must be submitted to the following contact person:

District Permit Engineer
Maintenance - Permits
Caltrans District 4
P.O. Box 23660
Oakland, CA 94623-0660

We look forward to reviewing the Draft EIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process please send a copy in advance to the following address:

Kit Curtiss
Transportation Planning Branch
Caltrans District 4
P.O. Box 23660-0660
Oakland, CA. 94623

Should you have any questions regarding these comments, please contact Noreen Rodriguez of my staff at (510) 286-6312.

Sincerely,

JOE BROWNE
District Director

By



KIT CURTISS
Senior Transportation Planner

cc: Mike Chiriatti, State Clearinghouse
Craig Goldblatt, MTC
Patricia Perry, ABAG
Dennis Fay, Alameda CMA

APPENDIX C

Project Maps and Plans

PRELIMINARY LANDSCAPE SCHEDULE

SYMBOL BOTANICAL NAME COMMON NAME

SHADE TREES

Acacia melanoxylon	Blackwood Acacia
Celtis occidentalis	Common Hackberry
Metrosideros excelsa	New Zealand Christmas Tree
Platanus acerifolia	London Plane Tree
Tristania conferta	Brisbane Box

ACCENT TREES

Carpinus b. Fastigiata	Upright European Hornbeam
Prunus cerasifera	Purple Leaf Plum
Pyrus Aristocrat	Flowering Pear

EVERGREEN TREES

Chamaecyparis lawsonia	Lawson Cypress
Pinus contorta	Shore Pine
Pinus halepensis	Aleppo Pine
Sequoia sempervirens	Coast Redwood

SHRUBS

Abelia g. 'Edward Goucher'	Edward Goucher Abelia
Cistus purpureus	Orchid Rockrose
Nandina domestica	Heavenly Bamboo
Cotoneaster lacteus	Red Clusterberry
Dodonaea viscosa 'Purpurea'	Purple Hopseed Bush
Escallonia desalor	Escallonia
Ilex vomitoria	Yaupon
Myrica californica	Pacific Wax Myrtle
Nerium oleander	Oleander
Pinus mugo	Swiss Mountain Pine
Pittosporum tobira	Pittosporum
Podocarpus naki	Yew Pine
Raphiolepis indica	India Hawthorn
Xylosma congestum	Xylosma

GROUND COVER

Arctostaphylos uva-ursi	Kinnikinnick
Cotoneaster dammeri	Bearderry
Juniperus h. 'Bar Harbor'	Bar Harbor Juniper
Hedera helix	English Ivy
Lawn	Sodded Lawn
Annual and Perennial Flowers	

Seeded Wildflower/Rough Grass Mix

NIMITZ FREEWAY

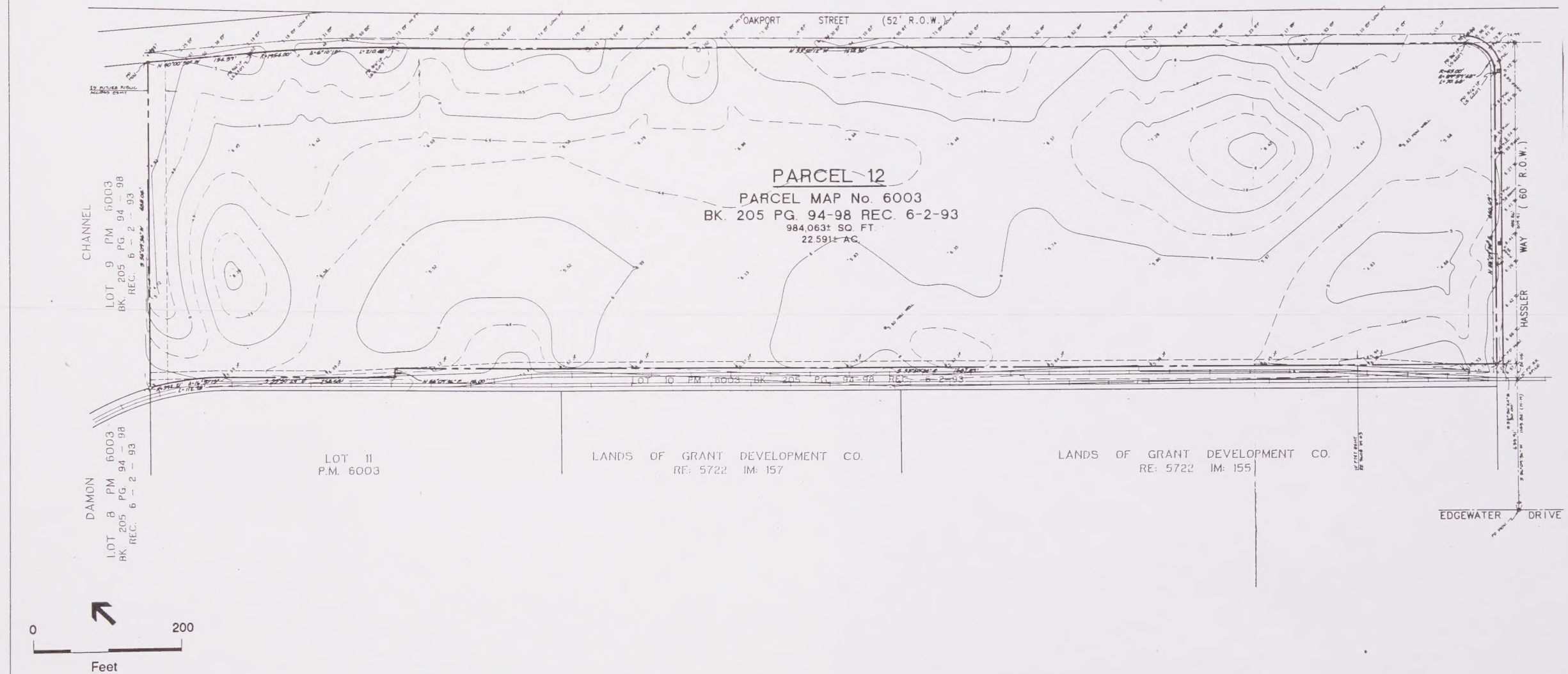
OAKPORT STREET

HASSLER WAY

0 200
Feet

SOURCE: Weisman Design Group

NIMITZ FREEWAY 880



SOURCE: Mulvanny Partnership

Figure C.2
Site Topography

U.C. BERKELEY LIBRARIES



C101744895

